JUNE, 1948

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XXIXth ANNUAL CONVENTION

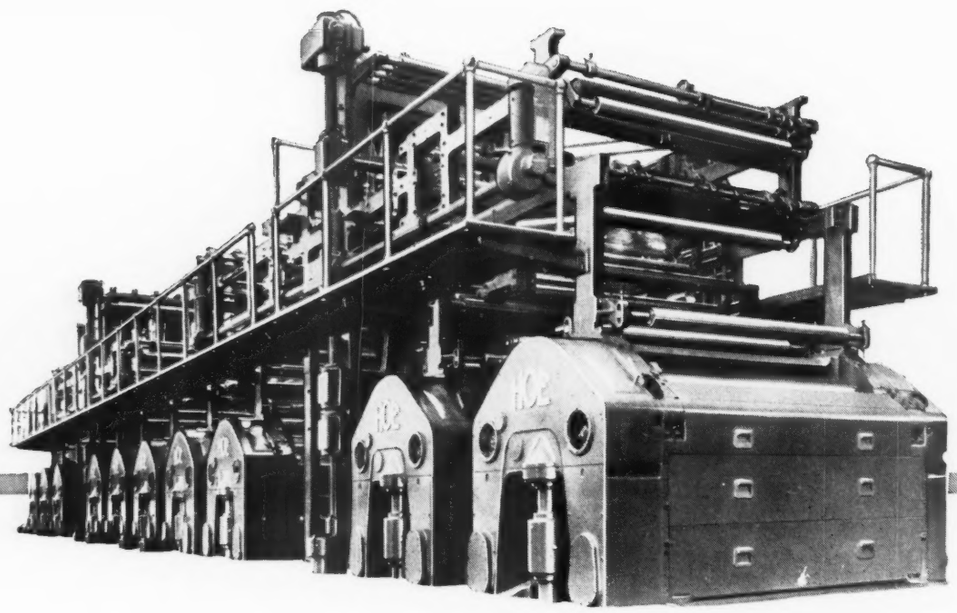
International Association of Printing House Craftsmen

Hotel Cleveland Cleveland, Ohio

August 8, 9, 10, 11, 1948

Printing Equipment Engineer

UNSURPASSED *for convenience and safety*



Operating safety and convenience were dominant factors in the cleanlined designing of the HOE COLOR-CONVERTIBLE NEWSPAPER PRESS. Important advantages that safeguard its operation and speed production include —

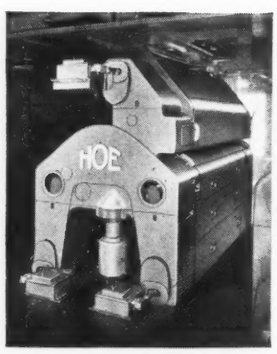
The unit and folder drive gearing is completely enclosed in oil-tight housings, with automatic forced-feed lubrication. Unit and folder drives have shear pin protection.

All inking adjustments can be made from outside the press, thanks to the Hoe patented pump system of ink distribution.

Impression adjustments, with visual micrometer, are made from outside the press. Feeding-in pans facilitate safe threading of the web. Compensators and turning bars are adjustable by convenient hand wheels located outside the press.

Folder adjustments — including the exclusive Hoe fold control feature — can be made during operation from safe vantage points outside the press.

Equally ultra-modern in all other features throughout its construction, the HOE COLOR-CONVERTIBLE NEWSPAPER PRESS is unsurpassed for safety, convenience and performance.



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with extra color cylinder

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You have to see this new Sta-Hi MasteRouter curved plate routing machine to understand why it is the talk of the industry.

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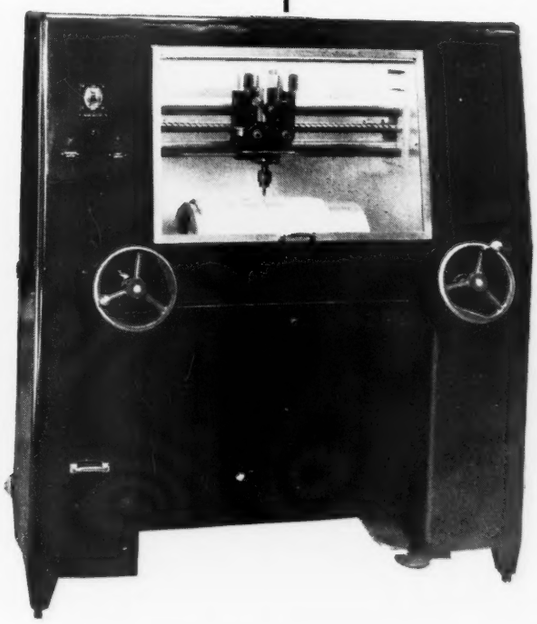
You'll be able to watch a trained operator put the machine through its paces, or take over the controls yourself for the smoothest, quietest, most effortless job of curved plate routing you've ever known.

You'll be amazed at the way you can lock a large sized router bit in the precision-built chuck, slip the traverse drive into its exclusive "power feed", and strip a plate like cutting butter with a hot knife.

That's just one of the many features that make the MasteRouter a complete, entirely new, self-contained "router room" in itself... Be sure to see it in Pittsburgh next month!



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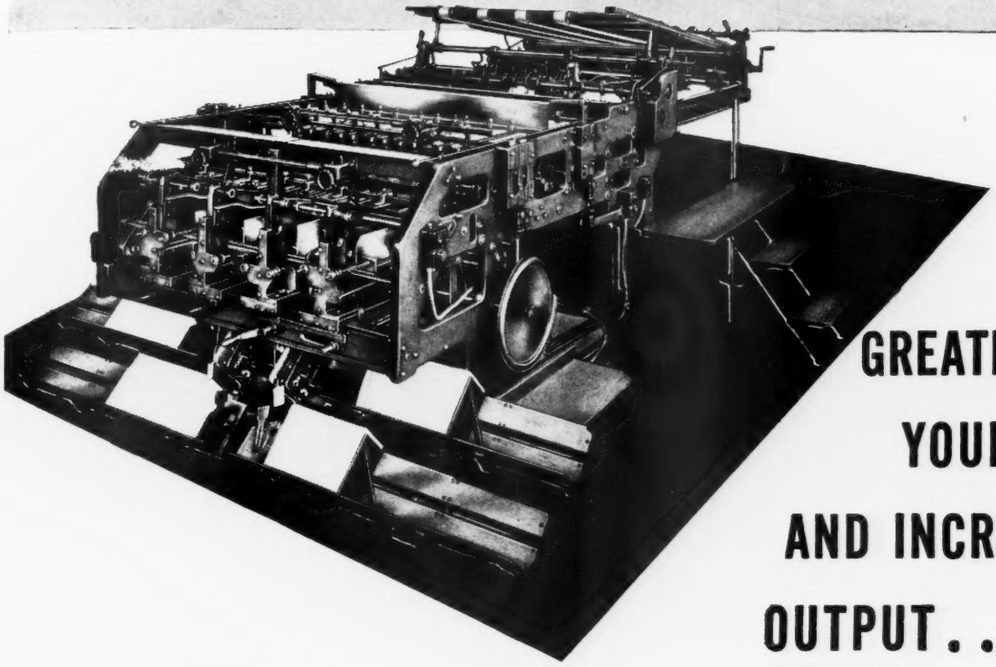
In Book Production...



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DEXTER Machines are built by Dexter Folder Company at Pearl River, N. Y.
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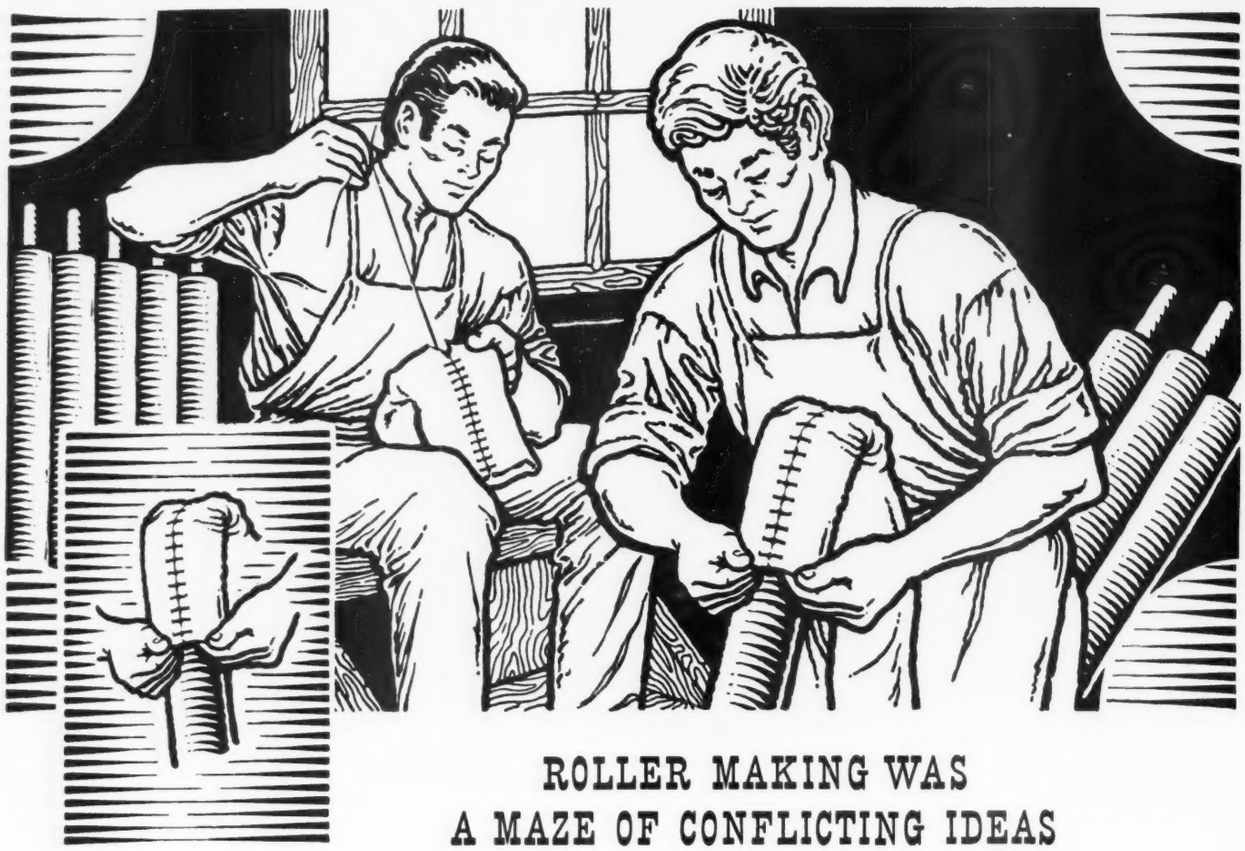

ROLLER MAKING WAS A MAZE OF CONFLICTING IDEAS

IN 1813 Lord Stanhope, an inventive nobleman, furnished the London Times with a new steam-driven press and the world with a challenge as exciting as the California Gold Rush.

Thinking men, get-rich-quickers and aristocracy all joined in the race to produce a method of inking this revolutionary machine.

For a time rollers made of buckskin, stretched over wooden or iron cores and covered with the sticky discovery attributed to Adam Spears, were used. India Rubber and even wooden rollers were tried.

But it remained for Benjamin Foster, a master compositor and pressman, to produce the first composition roller.

His roller had a wooden and canvas core which was covered with "Compo" made of molasses, glue and tar. Later printers Bacon and Donkin discarded the canvas and patented a roller more similar to today's.

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OVER ONE HUNDRED YEARS OF ROLLER MAKING

PRINTING EQUIPMENT *Engineer*

Volume 76 Number 3

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

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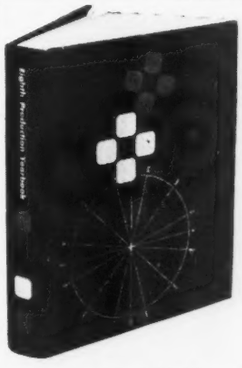

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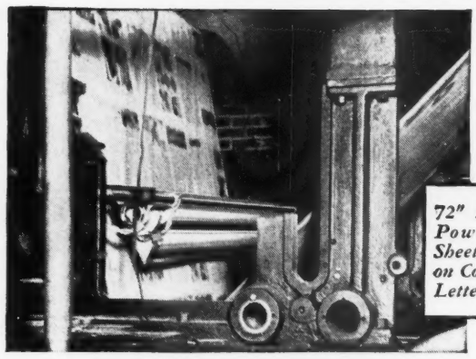

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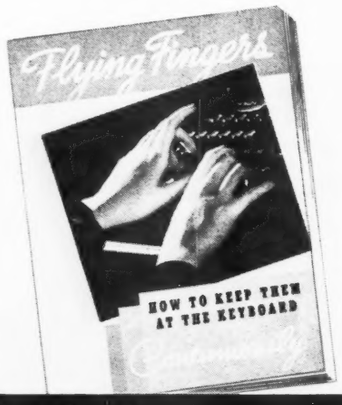

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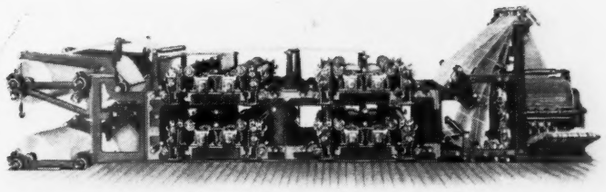

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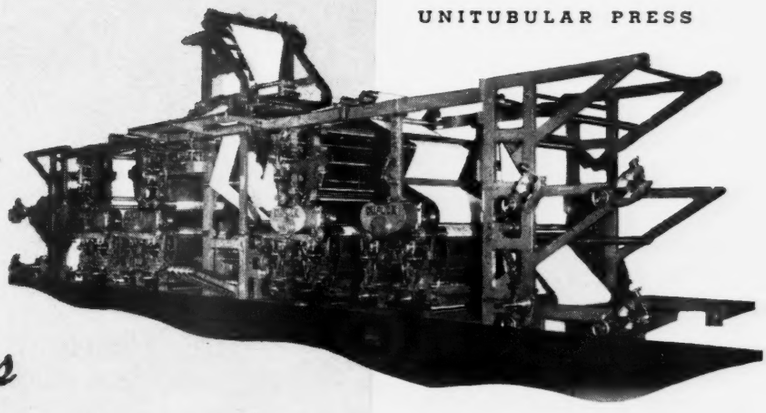

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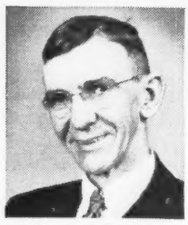
Mr. George Stone
Composing Room Foreman

Mr. C. C. Rogers
Chief Machinist



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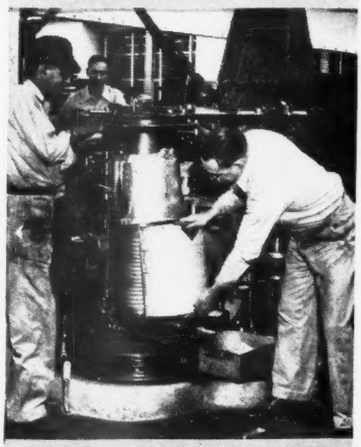

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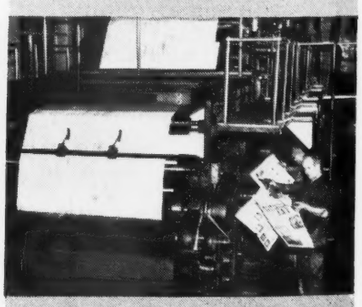

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GAS VERSATILE FUEL FOR *Graphic Arts* PROCESSING

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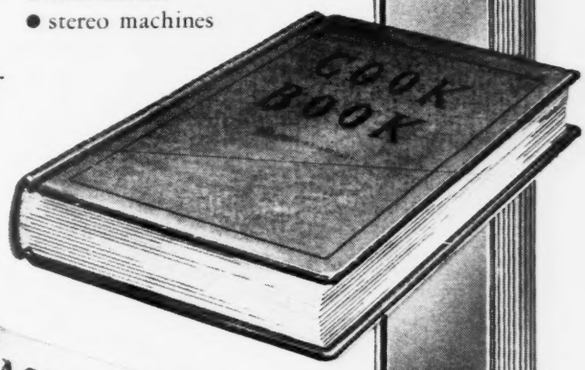

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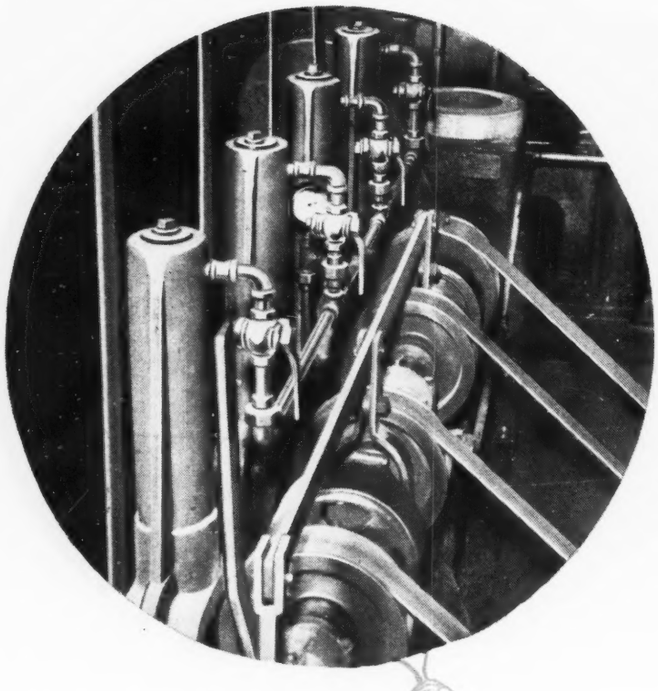

An air-piston for each belt—set to tension desired—automatically adjusts each belt tension perfectly. All air-pistons combine automatically—act as one huge air-brake—when you throw the Red Button Stop.

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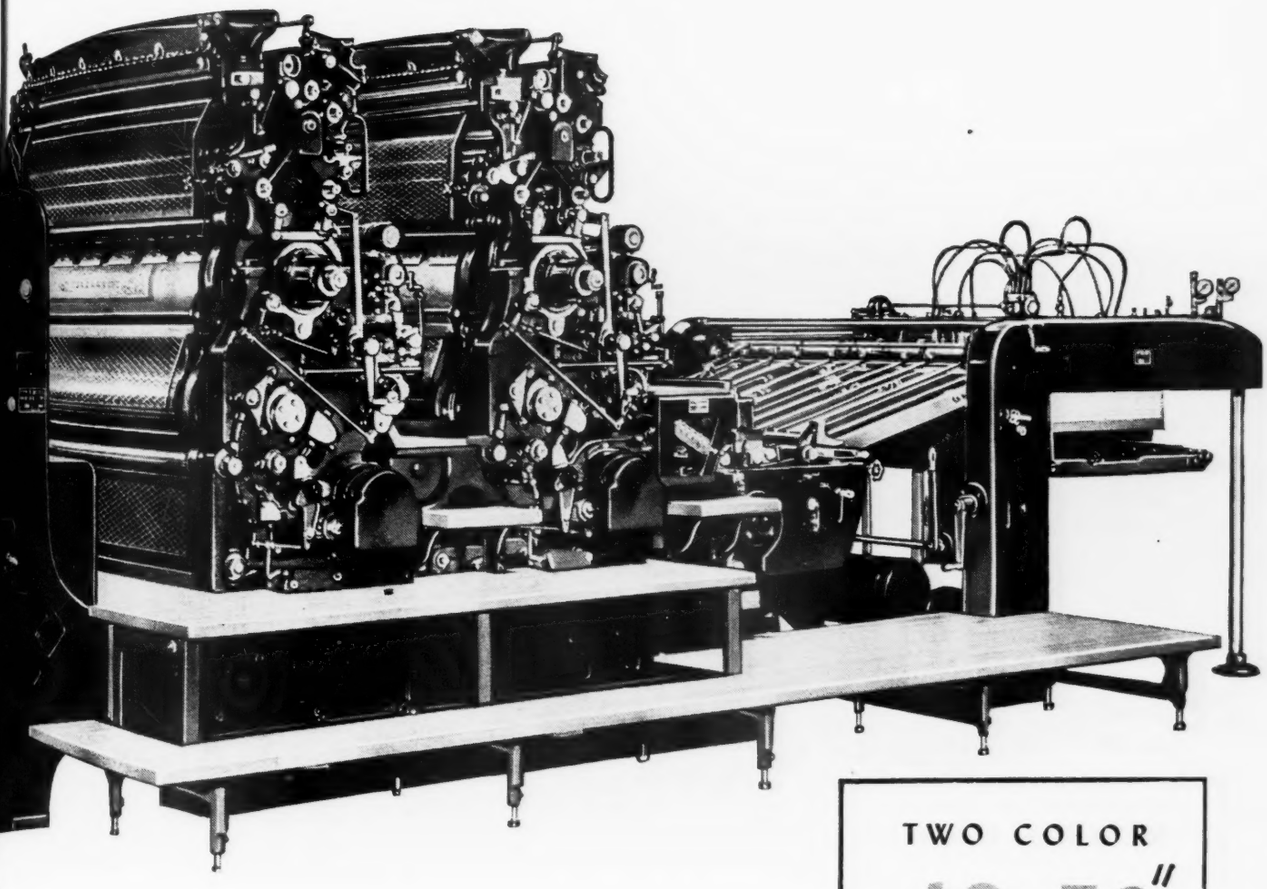

TWO COLOR

42 x 58"

This NEW HARRIS press is also manufactured in one- and four-color models

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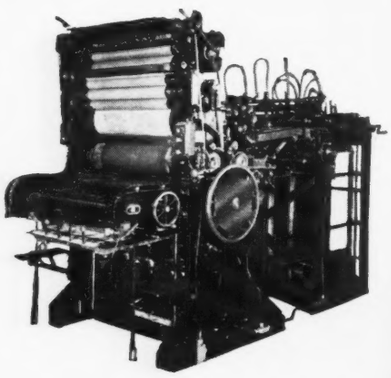
...with more to come!

The Willard Offset Press originated in Gegenheimer's machine shop in Brooklyn in 1934. The first press was completed in 1935. Prior to the war, four presses were built and installed in commercial shops. After operating steadily for as long



as thirteen years, the first Willard presses still continue to produce profitably for their owners.

E.B.CO Takes The Helm

During World War II the 50-year-old Electric Boat Company purchased the Willard Press. E.B.CO redesigned and streamlined it under Gegenheimer's careful tutelage, and a complete, effective Sales and Service organization was built up.

"REGISTERS WITH LITHOGRAPHERS"

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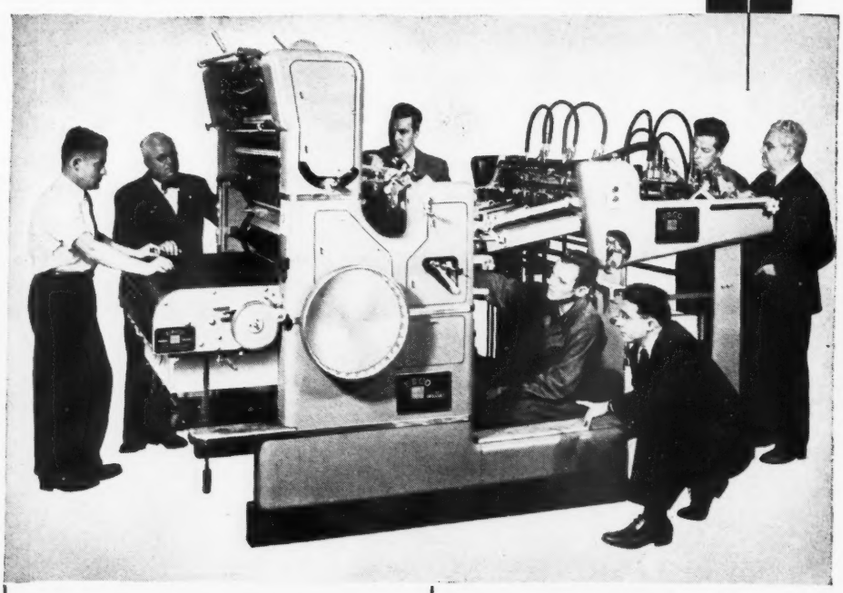

TO BE CONTINUED...

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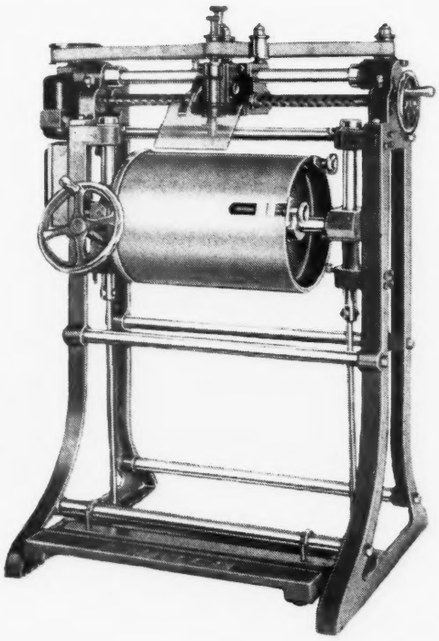
SMATCO ROUTERS



Curved Router

A prerequisite to good color printing is a properly prepared printing plate. This requires routing the curved stereotype plate to secure accurate color and page register. The outstanding value in machine performance for this vital operation is the Smatco Curved Router. Designed and constructed for efficient and reliable service, the Smatco Curved Router is priced within the budget of every Publisher and Printer. Standard models fit all rotary newspaper printing presses. Special sizes are manufactured to order for use with various size rotary magazine presses.

Radial Arm Flat Router

The exact specifications of the stereotype flat casts which go into the form have an important bearing on the typographical appearance of the printed product. The one mechanical operation which contributes most to the quality of the printed illustration is routing the flat plates. The Smatco Radial Arm Flat Router incorporates all the proven engineering principles required of a high speed precision routing tool. The capacity of the plate lockup is from single column to full page flat casts. The Smatco Radial Arm Flat Router is a sturdy and reliable precision machine within the price range of all the Graphic Arts trade.

JOHN GRIFFITHS CO. INC.

11 WEST 42nd STREET • NEW YORK 18, N. Y.

Be certain to see our SMATCO exhibit, Booth 32,
ANPA Convention, July, Hotel William Penn, Pittsburgh

The Long and short of it

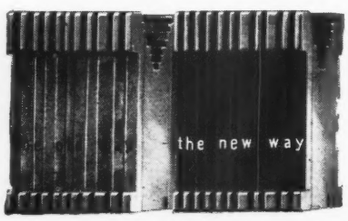
Independent research shows that the visibility of this type is approximately the same as that of the reference marks on linotype and intertype matrices which have been processed the Matrix Contrast way. By the same tests, the copy at the right has the approximate visibility of unprocessed reference marks on matrices that have been in use for some time. The studies were conducted by Dr. Matthew Luckiesh, Director of the General Electric Company's Lighting Research Laboratory.

Operators can "see what they set" when machines are equipped with sharp, clean-etched Matrix Contrast reference marks. Further, with the new Matrix Contrast Colors operators can tell at a glance if there's a wrong font letter in the line. With colored reference marks, different fonts have their own distinguishing color. You can't miss the contrasting color of the wrong-font letter. Compare this type with that at the right. There's an eloquent difference in visibility between them.

This torturing type is the approximate equivalent of what operators are forced to read when they hunt errors with unprocessed matrices. Eyestrain and fatigue are lessened when reference marks have been processed the Matrix Contrast way. Linotype and Intertype operators throughout the country have told us how much less strained and tired they feel after a day's work at machines that have been processed the Matrix Contrast way.

The difference speaks for itself. In the words of Dr. Luckiesh: "The processed matrices have a visibility approximately equivalent to 9½-point type (Printed with black ink on white paper) . . . as compared with the non-processed matrices which have a visibility equivalent to 3-point type under the same test conditions."

YOU CAN SEE



MATRIX CONTRAST CORPORATION

Empire State Building, New York 1, N. Y. — 326 W. Madison Street, Chicago 6, Ill.—1105 Trenton Street, Los Angeles 15, Calif. — Sole licensees of the Percy L. Hill Matrix Contrast Patent No. 1,796,023, other patent pending. European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E. C. 1.

Matrix Contrast Service

PRODUCTION SCHEDULE

Order No.	To Shop	JOB	CUSTOMER	MATERIAL	Promised	Com. Art S	Com. Art F	Camera S	Camera F	Litho Art S	Litho Art F	Stripping S	Stripping F	Platemkg. S	Platemkg. F	Proofs S	Proofs F	Presswork S	Presswork F	Finishing S	Finishing F	Delivery
7982	2/10/48	100M 4/col 12pp BKlts	XYZ Battery Co.	2 Runs 50M Shts 34x44	3/15/48	→		2/10/48														
				Fit & Turn 25M Shts 34x44 PRT																		
				20# Bond																		
8014	2/11/48	2500 Blue 17x22 Breadside	ABC Ptg.	2600 Sheets 17x22 60# Offset	2/13/48	→		2/11/48														
8015	2/11/48	2500 Blue 9x16 Streamers	ABC Ptg.	900 Shts offset 2 of 26 Ctd	2/13/48	→		2/11/48														
7887	2/14/48	50M-10-12-open 10 lots 50M-8-10-open 10 lots	United Greeting Card Co.	50M Shts 44x54 Laid offset	4/15/48	2/14/48		2/14/48														
		Greeting Cards 4 cols.		new art work																		

One kind of Production Schedule or Shop Order Form. This one is a combined Shop Order and Production Progress Form. The size of the sheet upon which the form is printed can be determined by the information and schedule items it is desired to include. As is explained by Mr. Reiser, the production battle is only half won without complete copy or dummy.

Planning Pays Profits in the Offset-Lith Plant

By ADAM HENRI REISER

THE progress of the offset-lith process may be said to be tied up with its advance in administration techniques. Oh, yes, technical improvements have accelerated the offset method of printing ahead by leaps and bounds. But the adoption of mass production techniques was made possible only through advanced administration practices. What are these practices?

For purposes of examination we'll break administration into two divisions: *Shop Orders*, or preparation of production instructions; and *Shop Procedure*, or modus operandi.

Shop Orders

The Shop Order is the first step into the plant taken by a job. That step can determine the margin of profit or loss for that job, and proper attention to this form pays mighty big dividends. In its execution, the Shop Order is written in an explicit, concise and clear form. However, clarity should not be sacrificed for brevity. The tendency to omit some of the necessary information creeps in because it may seem superfluous to the order writer or the production department where they may have become thoroughly conversant with it. However, economy of motion demands a shop order with all required instructions, leaving as little as possible to imagination, thus making unnecessary continuous contacts with the personnel of the production department.

Each department should be furnished complete instructions listed under separate headings. This enables each department to carry on without undue interference from any other department. In this way, the Shop Order presents a comprehensive, overall picture of the production steps, a prime necessity in checking the product. In addition, it provides an excellent review for the Estimating Department.

Complete Copy Counts

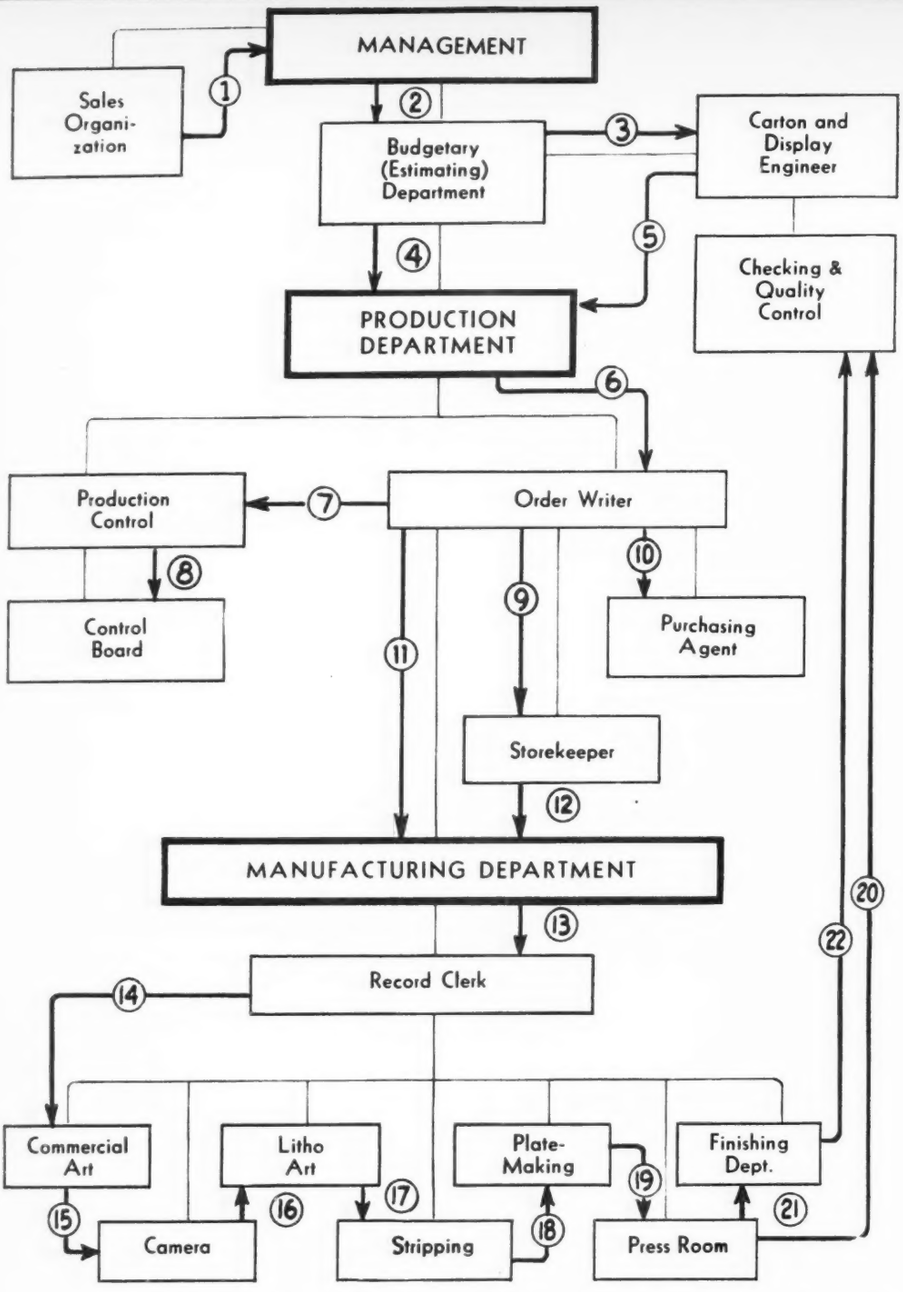
However, only half the battle is won without a complete copy or dummy. This provides an illustration—a further link in the chain of good instruction. A complete shop order combined with a complete copy—one supplementing the

Comment Upon Newspaper Advertising Composition

(Abstracted from address of Leon A. Link, Production Manager, Cleveland *Plain Dealer*, before Iowa Mechanical Conference, Waterloo, Ia., May 1948.)

ALL newspaper composing room foremen have more or less of a problem caused by frequent changes advertisers make in their proofs. So many times these changes are made because type matter or display lines do not fit into the space as the ad writer thought they would. Any advertising department equipped with vari-typers or similar machines, some of the machines could write copy, or lay out display lines, right in the advertising department and would know if they will fit as intended. Most of the popular display faces are available in Fototype and Artype fonts. Advertisers might design better looking ads and certainly it would be a saving to newspaper; in some newspapers the saving would be tremendous. Many of the ads in the Chicago newspapers are being produced that way, insofar as composition is concerned. Some of that may be continued if, and when, normal operations are resumed.

I want to again make it clear that I do not believe these new methods have been developed to the point where they make for better operation than the modern typesetting methods. It is, however, important to every trained craftsman working on newspapers to put forth more effort to make our present processes work better. We only have to look back over our industrial history, to learn that when processes or methods in use became too costly or inefficient, newer and better methods have replaced them. American genius has always found a way to do things better.



FLOW CHART FOR AN OFFSET-LITH PLANT

1. Sales takes the prospective job to Management.
2. Management consults the Budgetary Department for an estimate, which in turn checks with the
3. Construction Engineer where the problems involved in carton or display are explored.
4. The Production Department receives the job when the contract is approved.
5. After advising the Budgetary Department of its findings with respect to the construction work, the plans are sent on to the Production Department.
6. Production assembles all the elements of information necessary to planned production and sends the whole on to the Order Writer.
7. The job then is relayed to the Control Department where planning takes place and the order is
8. Posted on the Control Board.
9. Checking then takes place with the Storekeeper for the supply of materials necessary to production of the job.
10. Requisitions are drawn for the materials and also orders are sent to the Purchasing Agent for outside purchases and replenishing of the stock through a running inventory.
11. The Manufacturing Department receives the Order from the Order Writer.
12. Supplies go to Manufacturing from the Storekeeper and outside suppliers through the Purchasing Agent.
13. First step in the Manufacturing Department is to the Record Clerk who gets out stock plates, flats, films or other standing elements and sends them along to the next link in the production chain.
14. Jobs that need Commercial Art work go to that department as the first step in Manufacture.
15, 16, 17, 18, 19, 21. Camera, Litho Art, Stripping, Platemaking and Presswork receive the job in the sequence dictated by the type of job.
20. Sheets are sent from the Pressroom to the Checking Department where quality, position of individual units, cutting and finishing and ink color is checked on each run.
22. Checking again takes place when the sheet goes to the Finishing Department.

other—will provide a rounded view of the job.

The dummy, made up to actual size, should include text in proper position and complete in every detail. The copy may be used in one department while the shop order is being used somewhere else. Loss of one will not halt operations or hinder work on the job to any great extent.

These two illustrations—one a word picture (the Shop Order), the other a physical picture (the dummy), both complete in themselves—will save untold hours of wasted time seeking information. Perhaps more important is the fact that friction among the personnel is reduced to a minimum through intelligent handling of instructions. The artist, cameraman, opaquer, dot-etcher, stripper, platemaker and pressman all deserve to get detailed information on the purposes, the planning and the production of the job. It should be on the Shop Order. It should show on the copy.

Essential to this end, is an intelligent litho-minded order clerk, well-grounded in the industry and its methods. A real production department, now consists of people familiar with the needs of the various departments in the production chain, able to interpret those needs and translate them into terms of the job in hand.

Other Manual and Mechanical Aids

The second part of administration that is so essential we'll call Shop Procedure. This term applies to the handling of the job in the production chain. To operate more effectively, use is made of flow charts, organization charts, schedules and progress sheets. But running through all these is the highly important factor of checking, just as it is through all the offset-lith operations.

Checking is listed under this heading because the plant scene is the last theatre of operations against errors. Errors can creep into any phase of the process, but it is the concern of every department head and worker for that matter, to keep these at a minimum. Errors are costly, and when one slips in, it very often promotes others, and then really serious loss ensues. Continuous vigilance must be the watchword, and that means checking.

Key men are ever on the alert to check every step of the instructions for their departments, as well as others, with an eye to the relationship of other department operations to theirs. This is done to assure a steady flow in the work. The importance of checking was illustrated by a recent want ad in a New York paper, for a person capable of checking press sheets in the pressroom of an offset-lith shop. With present press speeds placing a heavy burden upon the pressman — 15 min. of running may spoil upward of 1000 sheets—greater efficiency and greater saving is possible by checking continually throughout the day.

In Shop Procedure many vehicles are employed to ease the problem of adminis-

tration. In an organization of fairly large size, responsibility is placed by an Organization Chart, while the flow of work showing the progress of the job is shown by the Flow Chart. Various colors are used on the cards in the chart to designate different degrees of urgency in the job. Different shapes identify special jobs, while tabs of different colors draw attention to a particular job.

Delivery promise and the date when the job is to be ready for the following step is included, as well as the information on the paper, ink, color combinations, etc., for the job, and other vital information.

Administration will have obtained all the information in advance, and additions will be made to the Flow Chart as added information is obtained. Work must be prepared in advance so that the copy is ready for shooting, and the film will be ready for the stripper, and so on. Die cutting and finishing operations of folding, cutting and imprinting will be planned and decided upon in advance with provision made for emergencies, should there be a break in the flow of work.

There is danger of over-systemization, of course. It may not always work out as well as in the story of the man who had a gripe against a large corporation. He left his friend outside while he entered the building, was shunted from desk through door; to desk through more doors; and finally out of a door to the sidewalk. He was mad clean through, told his friend to wait, went back in again only to find himself out on the sidewalk again in due time. His friend asked him if he saw the president. He replied: "No, but have they got an organization!"

However, complete information does help produce the perfect job, and good administration practices pay off.

Wool Felt—
The Image Killer

(Abstracted from Research Progress No. 5, Research Dept, Lithographic Technical Foundation, Inc.)

ONE of the most common and often unsuspected causes of trouble in lithographic platemaking is the use of wool flannel or wool felt pads. Wool pads used during development or clearing of the plate can cause poor desensitization, grainy printing, gum streaks, and images that are difficult to roll up and that go blind.

Light hardened proteins like albumin, casein, gelatin, glue, etc., are termed by chemists as "hydrophobic" or water-hating. They prefer to be wet with grease or ink rather than water. Wool, which is also an insoluble protein material has the same hydrophobic, water-hating properties and is also preferentially grease receptive. No matter how wet with water wool may be, when it comes in contact with greasy material, the grease is attracted to the wool where it displaces the water.

It follows then, that when wool flannel or felt is used in developing or clearing a plate, the wool is apt to remove the ink from the image particularly from the peaks of the grain. Then, when the plate is etched and gummed, these bare metal grain peaks are easily desensitized and the image prints with a broken-up, grainy appearance.

This condition can occur on both albumin and deep-etch plates. It is more serious on aluminum than on zinc since aluminum has a tendency to print sharp which intensifies the effect while zinc tends to print full and covers it up. The effect is aggravated if excessive water, acid, or gum is used in the press fountain.

When the greasiness or water repellent characteristics of the developing ink have been removed by wool flannel or felt during platemaking, the image is no longer able to fully repel the etch or the gum. The platemaker then rubs harder or works faster to prevent streaks and in so doing, keeps the etch from forming a good, durable desensitizing film on the background areas. Likewise, fast, hard rubbing when gumming up, prevents the gum from forming a good protective layer which can resist the penetration of wash-out solvents or the later penetration of asphaltum. This is particularly true of cellulose gum solutions which should be worked over a plate very deliberately and with a very light touch.

Sometimes the reduced printing quality of the plate caused by rubbing the image with wool is not evident to the platemaker. Without realizing it, he may thus make a poor plate which will later cause trouble on the press and result in the loss of valuable press time.

All these troubles or potential troubles can be avoided by the use of cotton pads. Cotton is a carbohydrate material which puts it in the same class as gum arabic, cellulose gum, starch, etc. Carbohydrate materials are "hydrophilic" or water-loving. They prefer to be wet with water and have little or no affinity for grease. The use of absorbent cotton or molleton during the development or clearing of a plate thus offers little danger of injuring the image by removing the ink from it.

The moral of the story is simple. If you are using wool in your platemaking department, better get rid of it. It is much more economical and wiser to adjust the platemaking procedure (coating thickness, exposure time, etc.) so that development and clearing can be done with cotton than to sacrifice printing quality or waste time on the press trying to doctor up a poor plate. The Cronak and Brunak anti-oxidation pre-treatments for zinc and aluminum, and also pre-etching, can help considerably since these treatments make all plates much easier to develop and clear. In many cases, pre-etched Cronaked and Brunaked plates can be developed and cleared by a gentle swabbing with absorbent cotton even in hot, humid weather.

NJ Conference Canceled

Cancellation of the 1948 Mechanical Conference of the New Jersey Press Association was announced by Neal E. Dyer, president of the Mechanical group, following a meeting of officers with O. J. Hale, executive secretary of the parent organization. Difficulty in arranging hotel accommodations because of the Republican and Democratic National Confentions was given as one of the reasons for not holding the meeting this year.

Newspaper Color Should Be Profitable

(Abstracted from address delivered by Leon A. Link, Production Manager, Cleveland *Plain Dealer*, before Iowa Newspaper Mechanical Conference, Waterloo, Ia., May 1948.)

IT IS my understanding that some of the smaller daily newspapers can run spot color in advertising without any appreciable increase in cost. This is not true on what might be called medium size and large newspapers. On those newspapers, particularly the larger ones, the increased cost starts when they begin to talk about the ad and continues throughout the operation. In my opinion only a few charge an adequate rate for color. Color used properly sells more merchandise than just a black ad, everything else being equal. There is no doubt in my mind that many newspapers are running color with less profit realized from the space used, than they would have received had the ad been in black only.

The mechanical men have as their problem the reduction of cost for color operation. Management should tie the proper price tag onto it. When we get color priced as it should be and we also develop methods and equipment that will turn out good color printing at a reasonable cost, then we will begin to know some of the things we should know.

New Officers, Pacific Newspaper Mechanical Conference—Elected to office at the May meeting are (left to right:) Lester Crebassa, Washington representative, Seattle (Wash.) *Times;* Edw. N. Conley, Northern Div. Secretary, San Francisco *Chronicle;* Retiring President, J. W. Fitzsimmons, San Francisco *Call-Bulletin;* 1948-1949 President, Harold Winn, Hollywood (Calif.) *Citizen-News;* Northwest Vice President, Louis F. Otto, Portland (Ore.) *Journal;* Southern Div. Secretary, Fred J. Moyer, Los Angeles *Daily-News.* Elected to office, but not present at the time this picture was taken are: Northern Div. Vice President, Fred Stoore, Production Manager, San Francisco *News*, and Southern Div. Vice President, L. M. Richardson, Production Manager, Los Angeles *Herald-Express*.

Pacific Conference *highlighted by necessity for improving physical appearance of newspapers—Howard King offers many suggestions—Clinics well attended*

By FRED J. MOYER*

**Southern Div. Secretary and Machinist, Los Angeles* Daily News.

THE 1948 meeting of the Pacific Newspaper Mechanical Conference was held in San Francisco at the Fairmont hotel, May 1, 2 and 3. When it is taken into consideration that this conference covers the western part of the United States—all west of the Rockies—it must be realized that many of the executives traveled more than a thousand miles to attend.

This conference covers such a large territory that it is separated into two divisions—North and South. The meetings alternate sectionwise each year and the officers are located at the place of meeting. This facilitates arrangements for the conference. The officers from the opposite division assist by mailing all publicity literature in their respective districts.

Approximately 450 were in attendance. They came from Canada, Washington, Oregon, California, Arizona, New Mexico, Utah, Idaho, Nevada, Montana, and other points.

The death of William Grenier, president of the New England Newspaper Supply Co., on Sunday, May 2, while at the headquarters hotel to attend the conference was deeply felt by all present. He was accompanied by his daughter who was with him at the time of his death. He was well known throughout the country and had attended many mechanical conferences.

The Saturday meeting was started with a luncheon. Immediately following, President J. W. Fitzsimmons introduced Clarence E. Lindner, publisher of the San Francisco *Examiner*, who made the welcoming address. Mr. Lindner stressed the importance of the mechanical departments. He said it was time for improvements to be made and that improvements usually come from the bottom up. It is his opinion that it would be profitable to give monthly prizes for suggestions for improved methods of production. Mr. Lindner said he was not talking about short-cuts but improvements in the finished product that goes to the readers.

The executives were interested in many subjects but at the top of interest were the shortage of apprentices and the stagnation of printing methods. By stagnation is meant the lack of new methods, new ideas, in fact a "new look."

It was suggested that extensive research should be made in an attempt to obtain something that would appeal to the reading public. Radio and television have been developed and are in direct competition with newspapers, yet the news of today is being handed to the readers through the same route and in the same style as it has for many years.

(*Continued on Page 46*)

Commencing at lower left, clockwise around picture, are: J. A. Reid, Los Angeles Manager, California Ink Co.; Earl Owens, Pacific Press, Inc., Los Angeles; L. A. Bickford and Virgil Muhler, both of California Ink Co.; Roger Hicks, Los Angeles *Daily News;* Lloyd Bjelland and Mose Olney (connection not identified); W. H. Ingram, jr., sales manager, and A. W. Johnson, Los Angeles representative, both of Wood Flong Corp.

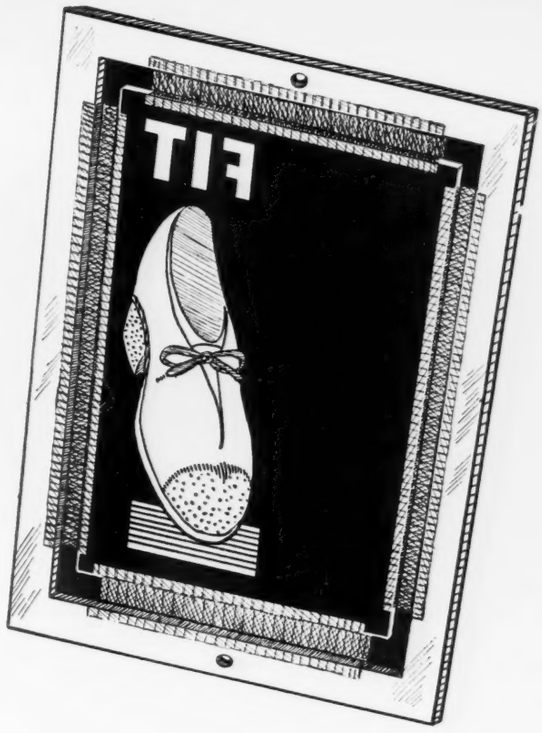


Fig. 3.—Artwork for a color page is sometimes composed of more than one element. Several methods are used in rotogravure negative assembly. One method employed in the Crowell-Collier preparatory department in Springfield, O., is carried out in the use of steel or aluminum metal frames for positioning the glass negatives in register. The glass negative is affixed in register in the metal frame by means of tape according to register marks in the negative itself. The camera in which the negative is to be placed in order to photograph the positive, also is fitted with a metal frame. In the camera frame are fitted two dowel pins attached in the same relative position as the holes shown in the upper and lower parts of the frame in this Fig. 3. When all negatives have been assembled in their proper position, the frame is placed in the camera. By this method several exposures can be made on the same positive by simply removing one negative frame and placing in the camera another frame containing another element.

An Outline of Methods Used in Producing Rotogravure Cylinders

By ALLEN C. BLACK*

*Superintendent Gravure Preparatory Department, Crowell-Collier Pub. Co., Springfield, Ohio.

(Concluded from Last Month)

III.

Retouching Rotogravure Negatives and Positives

AFTER completion of the color separation and monotone negatives it is necessary to make positives from the negatives. Before this operation, retouching must be done to improve and correct the negatives.

Retouching accomplishes two purposes —correction of color separation, and detail separation. Color correction is required as the filters used in making the negatives will not separate the various colors 100% accurately. Detail correction is required since there is a loss of detail in both the shadow and the highlight areas, due to the range of negative necessary to obtain the proper positive.

To overcome these deficiencies, the retoucher changes the density of the negative by adding dye to certain areas or by the use of a reducing solution on other areas. The addition of dye to an area of the negative causes the positive to photograph lighter in that area, and the reducing of an area results in the positive photographing heavier in that area.

In order to eliminate as much hand retouching as possible certain corrections are made to the negatives by photomechanical processes which include masks, made from one negative to overlay another, and films, which overlay the negatives to increase highlight detail and to block out pure white areas. The masks are in reality light positives which overlay the negatives making for more accurate color separation. For example, a short range positive made from the blue negative, placed over the yellow negative, results in a further cutting out of the yellow in blue and purple tones thus allowing the pure yellow tones to maintain their original strength. The film overlays used to increase highlight detail are actually negatives which contain only the first two or three steps of the tone range of our normal negative, and these steps are exaggerated. This eliminates the necessity of hand highlighting each plate and tends for uniform highlight detail in all colors. The film overlay used on negatives to block out all white areas is made from a fully exposed, overdeveloped positive which, with a little hand work, is solid black in all areas except the pure whites. These overlays insure all colors will be alike along the edges of silhouettes and white areas within a reproduction.

The positives made from the corrected negatives are also retouched to further

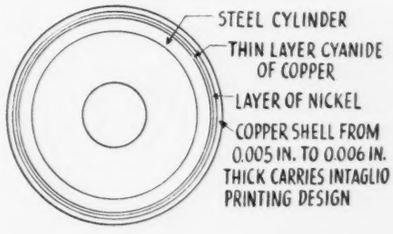

STEEL CYLINDER
THIN LAYER CYANIDE OF COPPER
LAYER OF NICKEL
COPPER SHELL FROM 0.005 IN. TO 0.006 IN. THICK CARRIES INTAGLIO PRINTING DESIGN

Fig. 4.—Cross-section diagram (not to scale) representing a rotogravure printing cylinder fabricated by the Ballard process. The outer covering (copper) of the cylinder is stripped from the cylinder after the press run and the cylinder receives a new coating of copper by electro-deposition. After the new copper coating has been plated and polished to a thickness of between 0.005 in. and 0.006 in. the cylinder is ready to be processed with a new printing design.

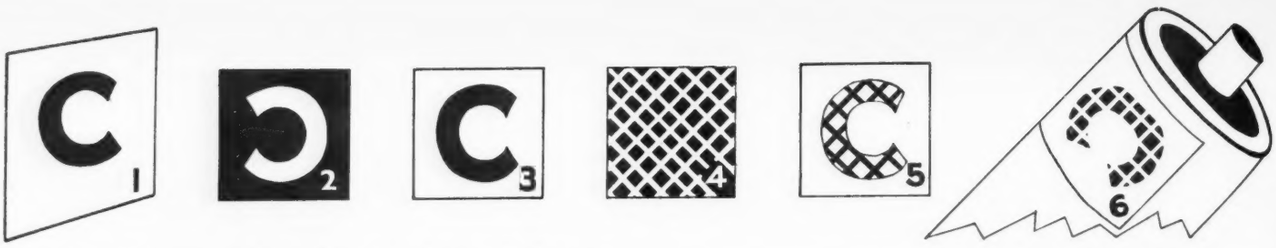


Fig. 5. — Diagrammatic Explanation of Steps in Rotogravure Cylinder Making Using the Conventional Gravure Cross-Line Screen.

1.—Art copy which is to be reproduced.

2.—Continuous-tone negative made from copy *1*.

3.—Continuous-tone positive made from negative 2.

4.—Cross-line gravure screen greatly enlarged to show screen formation. Lines are transparent, squares between lines are opaque. Conventional gravure screens usually range from 150 to 175 lines per inch, the lines intersecting each other diagonally across the glass plate.

5.—Section of carbon tissue in screened form ready to be laid down upon the cylinder. This has been obtained by printing screen *4* on the sensitized carbon tissue and then exposing screened tissue to continuous-tone positive *3*.

6.—Art copy *1* etched intaglio form in the surface of the printing cylinder.

the correction of the original negative deficiencies. If the first proofing shows the job is not an acceptable reproduction of the original, additional retouching of the positives is usually sufficient without the necessity of making new ones.

Negative Assembly

Artwork for a publication or a folder color page to be reproduced is sometimes composed of more than one element. In the finished printed job, of course, all elements must appear in their proper size and position. If the reproduction is to be in four-colors a set of color separations for each element would be required. The various negatives of each element necessary to complete the page must be assembled before the positives are made.

Several methods are used in negative assembly. One method is carried out by the use of metal frames for positioning the glass negatives. Illustrated Fig. 3 is an example of a negative positioned according to register marks in a metal frame by means of tape. The frame is made of steel or aluminum and a dowel hole is drilled through the top and bottom of the frame for positioning each frame in exact register on pins in the camera.

The camera, in which the frame containing the negative is to be placed in order to photograph the positive, also is fitted with a metal frame. The camera frame has metal dowel pins attached in the same relative position as the drilled holes in the negative frames. When all negatives have been assembled in their proper position, the frame is placed in the camera, the drilled holes in the negative frame fitting over the dowel or register pins on the camera frame. By this method several exposures can be made on the same positive by simply removing one negative frame and placing in position another frame containing a different element.

The Rotogravure Positive

A transparent positive is necessary in rotogravure as it is from this positive that prints are made on carbon tissue, which is the medium of transfer from the positive to the copper printing cylinder.

Two methods are used in making the rotogravure positive. If the reproduction is to be made by conventional gravure using the cross-line gravure screen, the positive is made continuous tone and does not contain a screen. The screen for conventional gravure is introduced later on in the process.

If the reproduction is to be made by the Dultgen process, a continuous tone positive and a screened positive are made for each color. In other words, a four-color reproduction would require eight positives (four continuous tone and four screened positives).

The screened positive is made by photographing the negative through an engraver's screen, which actually breaks up the illustration into opaque dots of various sizes and shapes. The necessity for a screened positive and a continuous tone positive in the Dultgen process will become apparent in that part of the article which explains the printing of the carbon tissue.

When the positives have been completed any type to be reproduced on the page is stripped in position. If the page is to be reproduced in conventional gravure the type matter is stripped onto the key positive and is etched into the copper cylinder with the illustration. In the event the page is to be reproduced by the Dultgen process the type is stripped on glass or film and etched as a separate operation.

The photographic portion of the rotogravure process is now complete and the positives are ready to be printed on carbon tissue and etched into the surface of the copper cylinder which, upon completion of the etching operation will be the actual printing cylinder.

Fig. 6.—Steps in Rotogravure Cylinder Making Using the Dultgen Method for Pictorial Color Printing.

1.—Art copy *1* which is to be reproduced.

2.—Continuous-tone negative made from copy *1*.

3.—Continuous-tone positive made from negative *2*.

4.—This is a greatly enlarged section of a photo-engraver's halftone screen; as usually used in gravure plate making, it is ruled 150 lines per inch. Note that this screen differs from the cross-line screen shown at *4* in Fig. 5; the ruled lines are opaque and the squares between the lines are transparent.

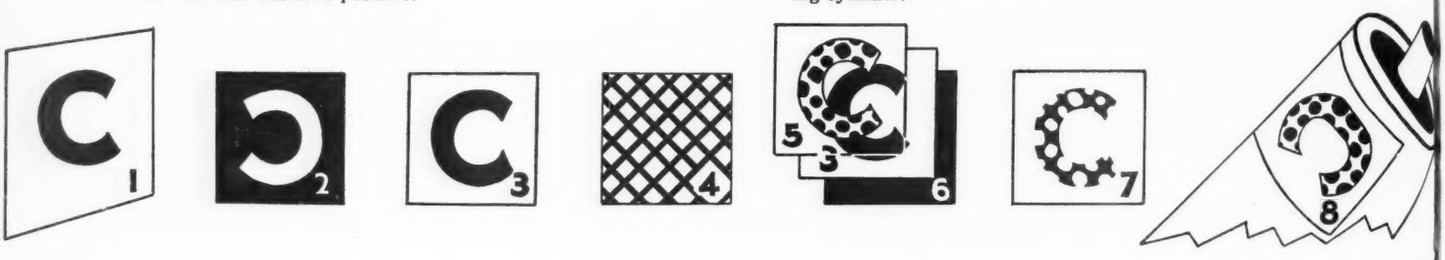
5.—Screened Dultgen positive.

3.—Continuous-tone positive.

6.—Carbon tissue which has not been screened. To obtain the screened Dultgen positive *5* the negative *2* is exposed to a photographic plate through the engraver's screen *4*, placed in the camera between the lens and photographic plate. To obtain the continuous-tone positive *3* the same negative *2* is exposed to a continuous-tone plate in the camera without a screen. These two positives are then exposed to a piece of carbon tissue *6*—first the screened positive and then the continuous-tone in register. Thus the carbon tissue *6* has had two exposures, one to the screened positive *5* and one to the continuous-tone positive *3*.

7.—Finished carbon tissue which has been produced by operations *5-3-6*.

8.—Art copy *1* etched intaglio form in the surface of the printing cylinder.



Printing the Carbon Tissue

As has been stated previously, the medium of transfer from the positive to the copper cylinder is a pigmented gelatin emulsion coated on a paper base and is commonly referred to as carbon tissue. The tissue is made sensitive to light by saturation in a potassium bichromate bath for a given period of time, squeegeed onto a ferrotype plate,[2] and dried by circulated air. The carbon tissue, after sensitizing, reacts in various ways to climatic changes and, as a result, should be handled in an air-conditioned room.

When the carbon tissue has been sensitized, dried, and removed from the ferrotype plate it is ready to be exposed, to light, through the positive. If the tissue is to be used for printing conventional gravure it is first exposed to light through a cross-line screen. This screen consists of thousands of fine transparent cross lines forming squares which are opaque. The tissue is placed in direct contact with the screen and exposed to a strong light for a pre-determined length of time. The action of light on gelatin creates a chemical change. The gelatin is made hard and insoluble in water to varying degrees, depending on the amount of light which passes through the screen and the positive. In screening the carbon tissue to the cross-line screen, or to the Dultgen screen positive, the strong light passing through the transparent areas hardens the gelatin causing that area to become insoluble in water, while the opaque areas hold back light and those areas are soluble in water. As a result, when the carbon tissue is developed in hot water the soft, soluble parts wash out, while the insoluble parts will not wash out to any great extent. This leaves a criss-cross of hardened cell walls, enclosing a cell covered by a soluble layer of gelatin.

After the carbon tissue has been exposed to the screen it is then exposed to the continuous tone positive. Inasmuch as the gelatin has already been made insoluble in the areas exposed to the transparent parts of the screen, the exposure to the positive will harden the gelatin only in the portions which were opaque on the screen. The extent to which these areas will be hardened and made soluble or insoluble depends upon the amount of light which is allowed to pass through the various densities of the positive. The portions of the positive which are opaque will not allow any light to pass through to affect the gelatin. Therefore, that part will remain soluble in water while the lightest parts of the positive permit a greater amount of light to reach the gelatin, causing it to become less soluble in that area. Each tone value on the positive between the opaque and the lightest tone is affected in proportion to the amount of light passing through to the gelatin.

When the printing of the carbon tissue to the screen and continuous tone positive is completed the result is a gelatin image composed of various degrees of soluble and insoluble gelatin, which is supported by a paper backing and is then ready to be transferred to the cylinder.

[2]Ferrotype plate—A steel plate covered with fixed enamel to provide as perfect a surface as possible, one that is free of all scratches, abrasions or adhering particles.

The Rotogravure Printing Cylinder

The copper surfaced printing cylinder consists of a steel base covered with a thin layer of cyanide of copper, which in turn is covered with a layer of nickel. The nickel surface is covered with a very thin film of oil.

The cylinder is placed in a specially constructed plating tank and a copper shell of from 0.005 in. to 0.006 in. thick is electroplated over the nickel surface. The film of oil acts as a partial barrier and, while it allows the copper to adhere firmly to the nickel, it also makes it possible to strip the copper shell from the cylinder. The shell is stripped from the cylinder on completion of the press run and the plating process repeated to prepare the cylinder for a new etching. This method of electro-plating copper cylinders is called the Ballard method after the inventor, Ernest S. Ballard.

After the copper shell has been plated on the cylinder it is necessary to polish the copper. The cylinder is placed in a machine, designed for that purpose, which permits a polishing stone to revolve and pass automatically from end to end over the copper surface. Several grades of polishing stones are used. When the cylinder is finished the copper will have a high gloss and be free from any pits or raised particles of copper.

Transferring the Tissue to the Cylinders

The prepared carbon tissue is applied to the copper printing cylinder with the exposed gelatin face next to the copper. Before this can be done a method for determining the exact position of each piece of carbon tissue on each cylinder is necesssry. There are several ways in which this can be accomplished.

One method is to scribe register marks on the cylinder (in the case of a publication) for each page of carbon tissue. The register marks must be accurate in position, length, depth, and width. This operation is done by a machine built for that purpose and is highly accurate in all dimensions. Similar register marks are made photographically on the positive and are printed on the carbon tissue. A small hole is punched through the tissue in the exact center of the register mark. By bringing the register mark on the cylinder to the exact center of the hole punched in the tissue each page is properly positioned.

A second method of registration is by the use of a metal strip, usually zinc. Each positive frame is fitted with two steel lugs mounted in a certain position. Holes are drilled in the ends of the zinc strip, which has been coated with rubber cement, to correspond to the position of the lugs mounted on the positive. When the carbon tissue has been placed on the positive to be printed the zinc strip is applied, the holes in the strip fitting over the lugs mounted on the positive frame. When contact is applied while printing, the rubber cement adheres to the paper backing on the carbon tissue and at the conclusion of the printing the tissue can be removed from the positive with the zinc strip held firmly in place.

The carbon tissue is affixed to the copper cylinder in a machine commonly referred to as a laydown or layon machine. The machine has a large rubber squeegee roller the length of the face of the cylinder and can be raised or lowered into contact with the cylinder.

If the scribed cylinder method is to be used, the tissue is placed in its proper position on the dry cylinder by aligning the register marks printed on the tissue with the register marks scribed on the cylinder. The rubber roller is lowered into contact on the leading edge of the tissue to hold it in position. The tissue is then lifted slightly to allow water to be applied to the cylinder. While the water is being applied the cylinder is slowly rotated and the pressure exerted by the rubber roller causes the gelatin to adhere firmly to the copper.

If the zinc strip method of registration is to be used the machine is fitted with a bar in which a series of holes have been drilled for the positioning of various pages. The holes in the zinc strip are placed over the holes in the bar and a steel pin inserted. The rubber roller is brought into contact on the leading edge of the tissue which holds it in position. The pins and zinc strip are then removed from the tissue. Water is applied to the cylinder in the same manner as when the scribing method is used.

In both methods of registration it is possible to position a number of individual pages or duplicate forms in a row across the cylinder before applying the water. This permits the operator to complete the entire row in one operation. For each succeeding row around the cylinder the same procedure is followed until all the required pages or forms have been transferred to the copper cylinder.

Developing the Carbon Tissue

The development of the carbon tissue is carried out by revolving the cylinder in a pan of water. Development is started in warm water and the temperature increased until the paper backing becomes loose. The backing is then stripped from the cylinder leaving only the gelatin. As development continues a certain amount of the soluble gelatin will be washed away, depending upon the amount of light which has passed through the positive, and the extent to which the light has hardened the gelatin. As a result, the portions of the positive which were opaque permitted no light to pass through and harden the gelatin. Therefore those parts are soluble and will leave only a very thin coating of gelatin on the cylinder after development is completed. By the same token, the lightest portion of the positive, or highlight areas, admitted a larger percentage of light to pass through and harden the gelatin and those portions being less soluble will retain a very thick coating of gelatin on the cylinder after development is completed. Between the opaque and highlight tones are other tone densities which have been

affected by the amount of light passing through to the gelatin. Those areas will be soluble in development only to the extent of the light admitted.

Complete development requires approximately 20 min. After this the cylinder is allowed to dry.

The final result on the developed cylinder is a gelatin relief image of the original copy. If the tissue has been prepared for conventional gravure the screen cells are all of the same size and shape. If the tissue has been prepared for the Dultgen method the dot cells are of various sizes and shapes.

Etching the Rotogravure Cylinder

Before the etching can be started the areas which are not to be etched are covered with an acid resisting paint, since the entire cylinder will be revolved in a tray of the etching agent, which is perchloride of iron. The reader should remember that the gelatin through which the acid or etching solution will penetrate and etch into the copper is of various thicknesses. This means that the etching solution will first attack that portion of the gelatin which is covered by a thin film only.

To start the etching a heavy Baume[3] is applied to the cylinder and this will attack only the thin portions of the gelatin. This will be the deepest area of the finished etching and, as a result, will carry the most ink on the final reproduction. When the etching has progressed to a certain point it becomes necessary to use a lighter Baume in order to start the etching in areas covered by a thicker layer of gelatin. A lighter Baume is made by the addition of water to the perchloride of iron. As the etching continues to progress still lighter Baumes are required to penetrate through the heavier layers of gelatin until finally all of the tone values of the original subject are etched to their proper depth in the copper cylinder. After this, the acid resisting paint is removed and the cylinder is thoroughly cleaned.

When the cylinder is completed, that particular color of the original copy is represented by an etched copper surface divided into millions of tiny cells. If the Dultgen process has been used, the cells are of a different size and depth, and if conventional gravure has been used the cells are all the same size and vary in depth only.

[3]For the purposes of this discussion, it is sufficient to state that Baume is a system of measurement of liquids, that is, it is a specific gravity of a solution as indicated by a hydrometer.

Proving and Finishing Rotogravure Cylinders

When the etching of the set of cylinders has been completed they are proved, to check for quality, in a press built particularly for that purpose. As this type press is not used for production it is operated at slow speed in order to permit examination of the printed sheet while it is passing through the press. If, after proving, the cylinders require color correction they are either re-etched, to obtain more color on the printed sheet, or are spot-burnished, to reduce the color.[4] When the cylinders are correct in all color values they are ready to be sent to the production presses.

[4]It must be kept in mind for the purposes of Mr. Black's explanation that in re-etching a rotogravure cylinder, or certain areas needing a deepening of color, the effect to be secured by re-etching is directly opposite to re-etching halftone engravings. In re-etching a rotogravure cylinder, parts of the printing surface may be coated (staged) with acid-resisting paint leaving only that area exposed to the action of the acid which is to be etched deeper thus providing greater ink-holding capacity in the area in the cylinder which is to print heavier color. In the burnishing operation, which is accomplished usually by means of a small stone slip, the depth of the ink wells is made more shallow and consequently will hold less ink, thus lightening the printing of the area so treated.

(Conclusion of Mr. Black's Article)

21st Anniversary of the Iowa Daily Newspaper Mechanical Conference observed with successful meeting — New developments discussed

By ED. C. FUNK

Composing Room Foreman, Waterloo (Ia.) Daily Courier *and Immediate Past President, Iowa Conference.*

TWO hundred thirty Iowa and surrounding states newspaper mechanical executives, meeting here for the Iowa Daily Newspaper Mechanical conference May 15, 16 and 17, pronounced the event the most successful in the organization's 21-year history.

Ken I. Waughtal, President of the Kayenay Engraving Co., Mason City, Ia., was elected president for the coming year. He succeeds, Ed C. Funk, Composing Room Foreman of the Waterloo *Daily Courier*, who presided at the conference sessions. The 1949 conference will be held in Mason City.

Other officers elected include Howard Lee of the Ottumwa *Courier* first vice president; Tom Caldwell of the Cedar Rapids *Gazette*, second vice president; and Paul F. Kamler of the Clinton *Herald*, secretary-treasurer.

The Iowa Line-casting Machinists' association, meeting concurrently with the mechanical conference, reelected its officers: Bert DuSold of the Mason City *Globe-Gazette*, president; M. F. Dingman of the Cedar Rapids *Gazette*, vice president; and Leo Rosenberger of the Clinton *Herald*, secretary - treasurer. Directors named by the line-casters were P. W. (Slim) Hillier of the Muscatine *Journal*; George Horecka of the Oelwein *Daily Register*; and George Kriz of the Iowa City *Press-Citizen*.

At the opening session, delegates were welcomed by Mayor Bailey Barnes and Jackson McCoy, editor and general manager of the Waterloo *Daily Courier*. "Every daily newspaper in Iowa has profited because of men participating in this type of meeting," McCoy said.

ANPA Research

OBJECTIVES of a $280,000 mechanical research program by the American Newspaper Publishers association were outlined by C. M. Flint of New York, ANPA research director.

Posing before flowered background are new officers of Iowa Daily Newspaper Mechanical Conference—Left to right, they are identified as follows: First Vice President, Howard Lee of the Ottumwa *Courier;* Second Vice President, Tom Caldwell, Cedar Rapids *Gazette;* President, Ken I. Waightal, Kayenay Engraving Co., Mason City, Ia.; Secretary-Treasurer, Paul F. Kamler, Clinton *Daily Herald*.

The research program, Flint said, will embrace four divisions: Fundamental research into new processes; long range development of materials (a study of paper and ink); applied research into present-day equipment; and a technical service to ANPA members involving testing and reporting on new equipment.

Flint said that the newspaper research program is still very much in the formative state. He emphasized that, while trying to keep abreast of new developments, the research body will concentrate its energies on perfecting existing processes. He stated that his organization is anxious and desirous of extending full cooperation to all member papers in meeting their problems. Immediate problems being worked out, he said, include an automatic router and a new stereotype mat material that will eliminate the necessity of packing.

In an off-the-record talk at the closing session of the conference, Flint described the substitute typesetting and platemaking process being employed by Chicago papers. The Chicago *Tribune*, he said, has perfected a process which enables them to meet all previous deadlines. What the process is, Flint said he wasn't at liberty to say.

Link Banquet Speaker

LEON A. LINK, Production Manager of the Cleveland *Plain Dealer*, keynoted the annual banquet Sunday evening. Link, who was composing room foreman of the Waterloo *Daily Courier*, and promoted the organization of the Iowa Daily Newspaper Mechanical conference, pointed out that the Iowa session was started just a week after the ANPA held its first mechanical meeting in Harrisburg, Pa.

W. E. Wines, who was appointed Manager of the ANPA Mechanical Dept. in 1927 still is in the post. He attended the first Iowa convention in 1927 and spoke on the program at this year's session.

"Our newspapers are doing a lot of things today they couldn't do 21 years ago," Link said. "Our operations have been improved because of better machines in all departments, better supplies and more know how. Mechanical conferences have contributed much to this better know how."

But Link was critical in his demand that mechanical people live up to their traditions. "So far as I know," he said, "most everyone in the business agrees that newspapers should be better printed. We have hit some rough roads the past few years in our efforts to bring that about. I believe, that on the average, newspapers are not as well printed today as they were a few years ago. That condition has been brought about mainly because of the letdown in the quality of newsprint we have had to use . . . We are all hopeful that within a short time there will be improvement in the quality of newsprint . . . The management of most mills recognize this need and no doubt will do something about it.

Some Action Shots

CHARLES J. HENTSCHELL, Production Manager, St. Louis *Post-Dispatch*, spoke before press and stereo group at Iowa Daily Newspaper Mechanical Conference, Waterloo, Ia., on Sunday, May 16.

WM. P. MULVANEY, Vice President and General Manager, Rapid Electrotype Co., spoke earnestly upon the subject: *The Production of Advertising Plates and Mats for Reproduction by Newspapers*. His address was made Sunday, May 16, before Iowa Mechanical Conference.

HOWARD N. KING, Consultant on Typography to Intertype Corp. and Vice President of Maple Press, York, Pa., spoke at Iowa Conference on *The Newspaper of Tomorrow*.

HAROLD B. PLAUT, Asst. Chief Engineer, Intertype Corp., discussed Intertype's Fotosetter (photographic typesetting machine) before general session of Iowa Mechanical Conference, Sunday, May 16.

"I want to point out that all of us are engaged in helping operate an industry that means much to our people. Our newspapers have always been leaders in preserving the freedoms we enjoy today —freedoms that millions in many other lands would like to have as their own. If the people who live—probably I should say exist—behind the iron curtains of the old world today, had the kind of newspapers we have in the United States, there would be no iron curtains and there would be no countries controlled by Communism, Fascism or Nazism, or any of the other dictatorial isms. Our work is more than just a job. We should be glad to have a part in helping to provide the fuel that keeps the torch of freedom burning."

To Get Job Done

ANOTHER speaker, W. W. Warfel of the Pontiac Engraving Co., Chicago, said that "The war isn't over. You're still going to be short of help. It isn't machinery, it's knowing how to deal with people that gets the job done," Warfel declared.

A valuable feature of the conference was group clinics on composing room, stereotype and pressroom, photo-engravers and line-casting machinists.

Bud Hourihan, Mechanical Superintendent of the LaCrosse (Wis.) *Tribune*, described the results obtained in his plant by installation of three Teletypesetters owing to a shortage of help. An average hourly lineage of 330 to 340 was obtained by the device. Hourihan said.

That Better Newspaper

HOWARD N. KING of Intertype Corporation, Brooklyn, N. Y., said the trend is toward color, larger body size type in the newspaper

and articles dressed with up-to-the-minute pictures in the newspaper of tomorrow. He anticipated a reduction in page size, but not necessarily to tabloid size.

He displayed a number of advertisements, showing what improvements have been made in typography in the past 20 years. He explained proper use of white space and proportionate spacing of copy, all pointing to the use of lighter display faces, elimination of boxes and underscoring of words for emphasis.

King said he favors grouping heavy display and food store ads in the back section of the paper. He favors 1 pt. rule for inclosing ads; more than 3 pt. rules should never be used.

Harold B. Plautt, Intertype's Assistant Chief Engineer, spoke on Intertype Fotosetter. His talk was illustrated with slides. He explained its operation, its camera equipment, and showed several samples of his work.

Plates for Reproduction

William P. Mulvaney, Vice President and General Manager of the Rapid Electrotype Co., spoke on production of advertising plates and mats for reproduction by newspapers. He talked on depth of mats and plates, and answered many questions.

Composing Session

JOHN HARDIMAN of the Des Moines *Register-Tribune* and Howard Lee of the Ottumwa *Courier* led the composing room session in discussions of copy control, advertising markup, advertising deadlines, filing and storage of advertising cuts, installing of dispatch room and reproduction charges.

Most papers are now enforcing advertising deadlines of at least 24 hours and some 48 hours. Many of the papers are charging for copy alterations. With the heavy amount of advertising now experienced by most papers, considerable discussion arose as to the installation of dispatch rooms for medium size dailies running 160-180 pages a week.

Most men present felt that a better setup than now used is needed in handling the volume of advertising cuts and proofs.

Press Stereo Meeting

AT THE press and stereotype group session, Charles J. Hentschell, Production Manager of the St. Louis *Post-Dispatch*, spoke on *Recent Wood Press Installations and Operations at the* Post-Dispatch.

C. C. Baker, President of Sta-Hi Corporation, spoke on *Getting the Most Out of Your Sta-Hi Master Former*. He explained the construction and functions of the Master Former, and answered many questions as to proper maintenance.

J. V. Landau, Sales Manager of the Lake Erie Engineering Co., spoke on

Hentschell Describes the Post-Dispatch Installation

THE new Wood press in the plant of the St. Louis *Post-Dispatch* consists of 21 black and white units, 6 four-color units of a new design and six folders. Training of crews under the pressroom foreman began as soon as the presses were ready. The shortage of newsprint handicapped our training and made only a superficial final training possible.

Because our advertising and news departments use many sections of various sizes, the superstructure of the new presses is supplied with about a thousand pipe rollers and many angle bars to accommodate these varied sections. Therefore, the pressmen had a real job in learning where to place their leads and acquainting themselves with the operation of the new presses.

However, by January 11, 1948 we were ready to start up the new presses. Since we were changing our cutoff from 21½ in. to 23⅜ in., we had to break off completely from the old presses. In other words, we could not backstop our new presses with our old presses. The composing room was ready with their new chases; the stereotype department was ready to mold and cast the larger size stereotype mats and everyone alerted for the importance of the changeover. We have heard our changeover described as the largest newspaper changeover made in the United States in the last 25 years.

The first edition we printed was our Monday predate on Sunday, January 11, 1948, which normally is printed by one press with a press run of 25,000 copies. As part of the program we brought in crews for all of our presses and used two of the presses in printing the predate. The other presses were dressed and made ready for the Monday run and the two predate presses also made ready for the Monday run before the men left.

Needless to say, Monday was an historic day and, to our great satisfaction, went exceedingly well. The presses started on the first edition on time and got off the edition somewhere within a reasonable limit of their schedule. No edition on the first day was more than 11 min. late.

However, we did have our troubles, troubles that do develop with any new equipment. The stereotype equipment required adjustment; the presses required many mechanical adjustments despite the fact that they were doing a truly remarkable production job for us and have continued to show improvement every day.

With our Wood automatic pasters now in full operation we are averaging more than 30,000 an hour on our gross run but we expect to improve that as time goes on.

A new experience was in handling the electrical equipment for the new press. Our old presses had been powered by direct current, but we were shifting to alternating current. Here, again, we had a new tool to work with and had to learn to master it. The two lines of Wood presses are powered by four 200 h.p. and four 100 h.p. motors.

We are now preparing our four-color units, which are of new design, for operation and expect to have them in full use shortly. We are also playing with our new Wood pre-registering machine which we expect to be of immense assistance in getting color plates to the pressroom that can be locked up and run with a minimum of makeready. Preliminary tests indicate this is entirely possible. This machine requires the casting of plates ⅛ in. wider than normally used, thereby requiring the special setting of saws on the automatic. Four light registering devices on the pre-registering machine are made to register with the register marks on the key plate and then the plate is cut to the proper size with cuts being taken off the head and off the two sides of the plate. The other color plates are then put on the machine and their register marks are made to conform with the registering lights of the machine. When that is done the plate is cut, with the result that each plate should be cut exactly as the key plate in respect to the register marks. However, if metal shrinkage should be excessive from one plate to another, or internal shrinkage in the mat should vary, the machine cannot overcome those difficulties. You have two choices in those cases: If the variance between the plates is not too serious you can split the mis-register, or if it is too great it is advisable to cast a new plate. The beauty of this is that the pre-registering machine will tell you in advance when plates are badly out of register. Thus, you can correct the mis-register long before the plates are locked on the press cylinder when there is usually little time to make any changes, particularly when color is running in the daily edition.

Our Hoe direct pressure machine has been of tremendous assistance in keeping shrinkage from mat to press plate to about ⅛ in. We make up to actual paper size, mold with the so-called plastic mat which we bake under heat at a low holding pressure until the mat is thoroughly dry.

At our rotogravure plant, we also had a moving problem. Before the war we had bought a new rotogravure press from R. Hoe & Co. Its delivery also was delayed by the war, but the Hoe people made remarkable time. It was in production on our comics and roto section by the fall of 1946. It consists of two 1-4 combinations, one 1-1.

During the war we conceived the idea of a rotogravure-printed comic section and we had to incorporate a turn-over bar between the two 1-4 sections, which made it possible for us to pick up four colors on one side of the web, turn the web over and then pick up four colors on the other side of the web. This turn-over bar has worked out beautifully, to the point we hardly know the bar is on the press. We run our comics at 41,000 i.p.h.

The rotogravure plant presented its problems, too. The drives for the new press had been taken over by the government for war use and as a result the new drives had not been delivered when the press was ready to go. Since the new Wood press was not ready, we borrowed one of its 200 hp drives. As it was a chain drive and the rotogravure press was engineered for three small V-belt drives we weren't sure how it would work, but we were lucky—it worked out beautifully. Meantime, the new rotogravure press drives arrived in time so we could get them on and bring the 200 h.p. black and white drive downtown to power one of the Wood presses.

Press and Stereotype Group Session—These men formed the panel at speakers' table. Left to right, they are: R. E. Boller, Waterloo *Courier*, Co-chairman; Tommy Caldwell, Cedar Rapids *Gazette*, Chairman; C. C. Baker, Sta-Hi Corporation, Los Angeles; speaking is Wm. V. Mulvaney of Rapid Electrotype Co.; next is Manager Walter E. Wines of the ANPA Mechanical Dept., New York; at extreme right is Edward Rehm, Field Engineer, Wood Newspaper Machinery Corp.

Direct Pressure Molding. His talk was illustrated with slides on the operation and maintenance of the Acroplate.

Eddie Rehm of Wood Newspaper Machinery Corp., was present and answered many questions regarding the operation and maintenance of Wood Autoplate casters.

Tommy Caldwell of the Cedar Rapids *Gazette* and Earl Boller of the Waterloo *Daily Courier* were in charge of the press and stereotype group clinic.

Line-casting Machinists

BERT DU SOLD, President of the Iowa Linecasting Machinists' association, presided at the annual session of the organization in the *Courier* auditorium. Much interest was also shown in the demonstrations held in the *Courier* composing room.

Bert Stafford of the *Iowa Homestead* and formerly machine erector of Mergenthaler Linotype Co., installed a new mouthpiece and showed those present the proper way to set and secure correct lockup.

George Curle, Minneapolis, Minn., machinist, showed how to take off a set of distributor screws and wash off all dirt and grease with any standard brand of washing powder. He also demonstrated a specially built matrix galley equipped for quick removal of matrices from the machine. The bar and its attachments provide a simple method for buffing matrices.

During the demonstrations many questions were asked and were answered by practical demonstrations at the different machines. Herbert Lind of Mergenthaler Linotype Co., and Walter Severin of Intertype Corporation, assisted in the open forum.

Another unique exhibit was a machine built by Gordon Sanford of Fort Dodge, Ia., for reconditioning and truing combination rails on line-composing machine distributor bars. It resets bent or damaged rails and opens rails for free travel of matrices.

Photo Engravers' Meeting

CHAIRMAN Laurence Neibergal presided. After an introduction of all present, the chairman introduced Ken Waughtal of the Kayenay Engraving Co., Mason City, who talked on the subject *Contrast Control*. Originally this subject was to be presented with a demonstration, but because of circumstances it was necessary to forego the demonstration.

Mr. Waughtal discussed the effect of screen separation, lens aperture, temperature, agitation, and exposure time on the contrast of a halftone negative and exposure time on the contrast of a halftone negative and recommended careful reading of copy as a preliminary to good halftone proceedures. He stressed the need of standardized conditions for good production and recommended a separation between the range of one-half and three-quarters in. with appropriate lens apertures for good newspaper halftones. There was a question and answer period which proved of interest to the group.

Ernie Scherer, who developed the Scherer Cold Top Enamel as well as the Scherer Roll-up process was introduced to the group.

V. J. Currise of the Rockford (Ill.) Newspapers presented a paper dealing with the Modern Roll-up Process. Mr. Currise outlined the proceedure, emphasizing the need of a short first bite giving a depth of approximately 0.002 in. Mr. Currise stressed the need of eliminating any overhang of cold top enamel before inking the plate with a sufficient cap to melt down over the dot structure upon the application of heat. With just a little practice it is faster to etch a plate using this proceedure than by the powdering method.

The second bite of sufficient duration to provide ample printing depth will vary according to the screen, the type of negative, and also the length of the first bite. The removal of the rollup ink with benzol or other suitable solvent, and subsequent degreasing with lye, or some other material leaves the plate ready for re-etching. A weak solution of acid applied with a brush in a circular motion leaves the dot structure in the highlights as a conical formation, well suited to the needs of the stereotyping process. Because the etching is particularly clean and without shoulders, a properly etched plate by this process does not necessarily require as much depth as a powdered plate. One noticeable advantage is that the middle and three-quarter tones are almost as deep as the highlights and the shadows carry additional depth too.

Mr. Currise was elected Chairman of the Engravers session for 1949.

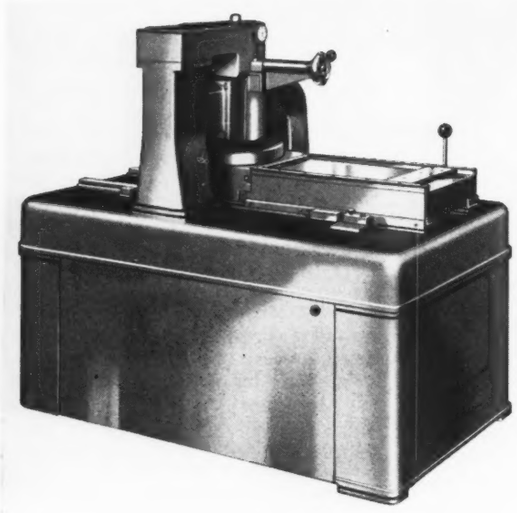
These men head an association within an association. They are encouraged to do so by members of Iowa Mechanical Conference. Left to right: M. F. Dingman, Cedar Rapids *Gazette*, Vice President; Bert DuSold, Mason City *Globe-Gazette*, President; Leo Rosenberger, Clinton *Herald*, Secretary-Treasurer.

Closing Session

AT THE closing meeting Val Wells of the Des Moines *Register-Tribune*, described that paper's new plant, which features, he said, delivery of papers non-stop from the presses to the waiting delivery trucks.

Among other improvements is an electric storage cabinet, which he lauded as one of the finest things you can have if you are crowded for room. The new presses have five color cylinders, Wells said. He advised papers to get their money out of color ads. "Twenty-five per cent above the regular rate is not enough," he declared. The paper now has more than 500,000 circulation and as many as 465,000 copies must be stored at one time. The mailing room is 132 ft. by 203 ft.

EQUIPMENT & SUPPLIES



Vandercook's Precision Block Leveller will accommodate plates up to 12 in. by 18 in. size. Planes wood, aluminum, magnesium and plastics. Equipment includes vacuum exhaust system for receiving metal and wood shavings. Maximum size plate can be planed in 11 sec.

High-Speed Block Leveller

A HIGH-SPEED precision Block Leveller will soon be put into production by Vandercook & Sons, Inc., according to E. O. Vandercook, President. This addition to the Vandercook line—which has been officially designated as the No. 12—will accommodate plates up to 12 in. by 18 in. in size, and planes not only wood, but aluminum, magnesium and plastics as well.

Vandercook's new Block Leveller has been designed to operate at a cutting speed of 100 lineal inches per minute, and double this speed (or 200 lineal inches per minute) when reversed to its starting position. In terms of production, this means that a maximum sized plate of 12 in. by 18 in. would be planed in 11 sec. with an additional 6 sec. for returning the plate table to the operator, or a total of 17 sec. for the complete operation.

The clamping jaws will go either straight forward, or forward and down. This makes it possible to correct warped wood mounting material by first planing the block with neutral clamping and then planing the outers side with the clamps exerting a down pull.

Raising or lowering the cutter head to the desired thickness is controlled by a wheel located within arm's length of the operator. Accuracy in making adjustments of the cutter head is controlled by an eye level indicator located just above the wheel and is graduated in 0.001 in.

Standard equipment includes a vacuum exhaust system for removing both metal and wood shavings, and depositing them into an easily emptied container. The machine measures 3 ft. by 5½ ft. A 3 h.p. motor is required to operate the cutter, and a 1⅓ h.p. motor for the exhaust system.

One of the new No. 12 Vandercook Block Levellers will be on display at the Vandercook Display Room, 630 South Dearborn St., Chicago, in June.

Long Beach Press-Telegram Installs Goss Press

IT WAS announced by W. F. Prisk, publisher of the Long Beach (Calif.) *Press-Telegram*, that installation had been completed in April on the paper's new seven-unit Goss Headliner press. The press has a top speed of 60,000 copies an hour.

The press, weighing 325 T. was installed at a cost of nearly $400,000. Seven units, four of them equipped for full color printing, can turn out 56-page *Press-Telegrams*, completely printed and folded, at the rate of almost 1000 copies a minute.

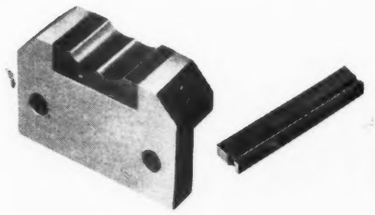
The *Press-Telegram* press is equipped with Goss tension plate lock. Continuous feed inking and quickly changeable ink fountains in the multicolor units are also incorporated in the press.

To insure precision register in color reproduction, a lens and electric light system is used to aid in milling plates before they go to press, eliminating the trial-and-error method of color plate matching. This new pre-registering machine, officially named the Tensionplate Automiller, was designed and built by the Wood Newspaper Machinery Corp.

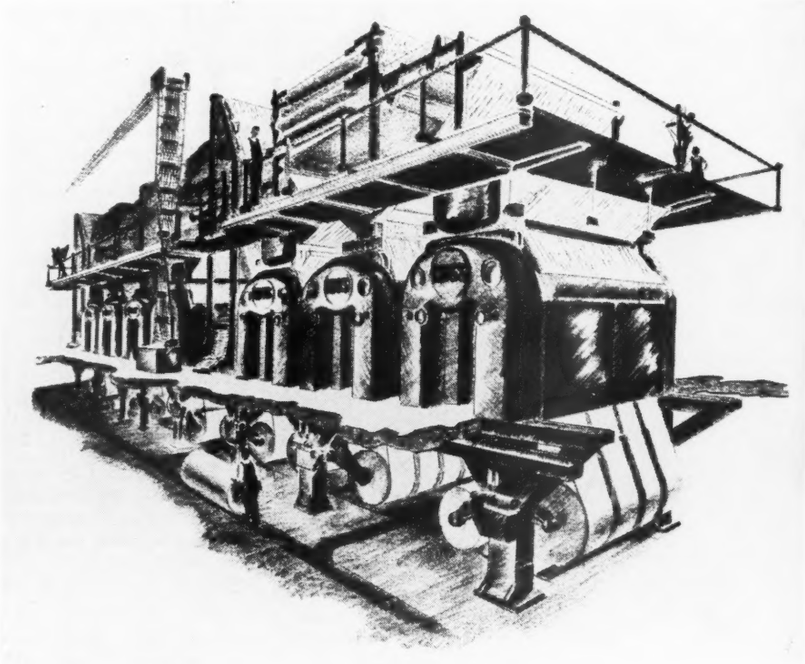
Carbide Inserts on Wear Parts

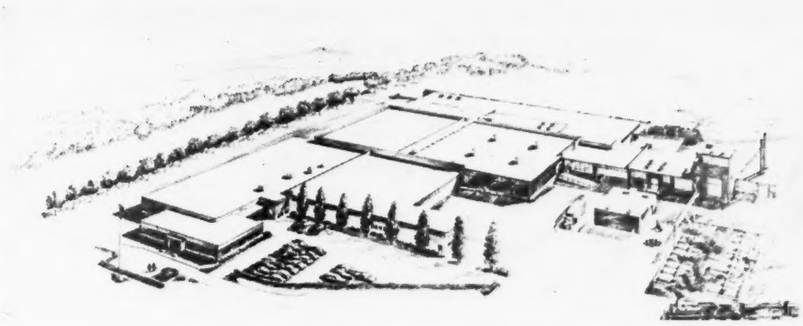
THE production of wear parts with carbide inserts at the point of wear has recently solved several industrial problems on both products and equipment.

In the accompanying illustration,



View of Super Tool Co.'s stapler clinching die with carbide insert and associated solid carbide wire guide. Parts so treated have long production life.





New IPI Printing Ink Plant and Research Laboratory — Interchemical Corporation and The Mutual Life Insurance Company of New York have entered into a sale-and-lease agreement providing for The Mutual Life to finance the construction of a one-story printing ink plant and research laboratory for Interchemical's International Printing Ink Div. in Elizabeth, N. J., and for the property, upon completion of the building, to be leased back to Interchemical for a long term. Announcement of the arrangement was made recently by James Beckett, divisional vice president and general manager of the International Printing Ink Div. and Henry Verdelin, vice president and manager of real estate for the insurance company.

The agreement provides for The Mutual Life to purchase a 12½ acre tract of land—the site of the building—at Elizabeth, New Jersey, and to finance the cost of improvements up to $1,600,000.

The steel, concrete and brick masonry plant will be used for production of printing inks, limited manufacture of ink varnishes, and a central research laboratory for the International Printing Ink Division of Interchemical. Facilities will include office, laboratories, production departments, tank farm, warehouse and employees' recreation room. The plant will have a floor area of 158,868 sq. ft. and the 12½-acre site which it is to occupy is part of a 43-acre parcel owned by Interchemical.

Super Tool Co. shows a commercial stapler clinching die with carbide insert and associated solid carbide wire guide.

According to the manufacturers of the stapler in which these parts are used, they have yet to experience a failure or to learn of one of these parts wearing to the point where replacement has been necessary after four months of continuous operation. The claim is made that the same parts is hardened steel had an average life of two weeks of continuous operation.

Super Tool Company will furnish specific information on parts of any size upon request, or *Printing Equipment Engineer* will be glad to pass along your request.

Matrix Additions

NEW additions to popular Intertype faces have recently been cut by Intertype Corporation. These are 8 pt. Alternate Gothic No. 1 with Vogue Bold Condensed, and 6 pt. De Luxe

ABCDEFGHIJKLMNO abcdefghijklmnopqrstuvwxyz 12345
ABCDEFGHIJKLMNO abcdefghijklmnopqrstuvwxyz 12345
8 Pt. Alternate Gothic No. 1 with Vogue Bold Cond.
ABCDEFGHIJKLMNOPQRSTUVWXYZA 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZA 12345
6 Pt. De Luxe Gothic Light Cond. with Med. Cond.
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEF 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEF 12345
6 Pt. De Luxe Gothic Light Condensed A with Medium Condensed A
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJK 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJK 12345
6 Pt. De Luxe Gothic Light Condensed B with Medium Condensed B
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJKLMNOPQR 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJKLMNOPQR 12345
6 Pt. De Luxe Gothic Light Condensed C with Medium Condensed C

Gothic Light Condensed with Medium Condensed, with three other 6 pt. sizes A, B and C. These new faces are shown here. Advance showings may be secured from Intertype Corporation, Brooklyn 2, N. Y.

Rosback Stitcher Bulletin

AN ILLUSTRATED bulletin entitled *Rosback 200 Series Saddle Gang Stitchers*, 8½ in. by 11 in. size, 8 pages, has been published by F. P. Rosback Co. Bulletin is descriptive, as title indicates, of the 200 Series Stitchers. This is a multiple station stitcher with single automatic stitcher head. Manufacturer states machine will handle any saddle stitching job in folded sizes from 2½ in. by 6 in. up to 12 in. by 26 in., consisting of any number of pages from two single 4-page sheets up to 3/16 in. thickness (1/8 in. folded). Made in two Models—No. 204 and 210; machines are identical with exception of timing box. May be had with from two to eight stations. Motor drives the machine through continuously variable-speed drive with handwheel at front of machine to control the speed.

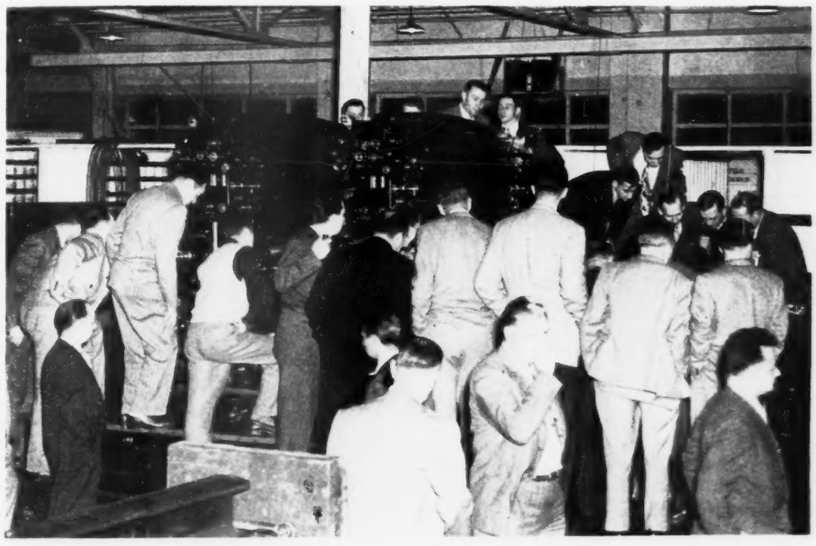
Two MLCo Bulletins

MERGENTHALER Linotype Co. has issued two illustrated bulletins, each consisting of four pages 8½ in. by 11 in. size. In the first is illustrated and described the Thermo Blo for cooling hot molds on Linotypes. Application of the machine is illustrated. Can be applied on a new Linotype at factory or applied to any outstanding Linotype equipped with Universal Ejector. The second bulletin is descriptive of Linotype Six-Mold Disk. One-piece construction of disk is illustrated. May be applied on a new Linotype at factory or applied to present Blue Streak Linotype in the shop.

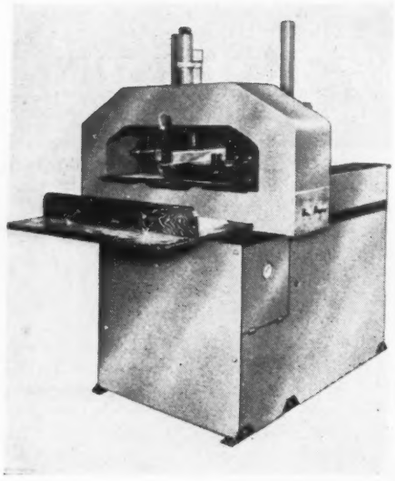
Stamp-O-Matic Gold Stamping Machine

PRINTING Industries Equipment, Inc., announces the Stamp-O-Matic gold stamping machine. This automatic machine, according to manufacturer, will do 40 or more covers per minute, 2400 per hour. Covers are automatically fed into the Stamp-O-Matic, properly gold stamped and delivered.

Stamp-O-Matic machines operate with hydraulic pressure which is adjust-



Cleveland's Litho and Craftsmen Clubs were guests of the Harris-Seybold Co. at two plant visitations to the Harris Division during May, Harry Porter, Vice President in charge of sales, reports. More than 125 members and guests of the Cleveland Litho Club visited the plant Friday, May 7, and a total of 217 Craftsmen and guests attended the regularly scheduled dinner meeting in the plant cafeteria on Thursday, May 20. Under the direction of Art Walker, Central District Manager, all visitors toured the Cleveland plant, witnessing numerous operations in the manufacture of Harris offset presses and litho chemicals. Special feature of the tour included a demonstration of the new Model 258, two color 42 x 58, Harris press in operation.



Printing Industries Equipment, Inc., announces Stamp-O-Matic Gold Stamping Machine. Operates under hydraulic pressure, from 2000 lbs. upwards. Machine, it is stated, will do 40 or more covers per min., or 2400 per hr. with automatic feed.

able for pressure and dwell. This feature, it is asserted, is of advantage for work which may have a variation in thickness since the hydraulic pressure automatically takes care of any such variation. Machines are fully automatic and are equipped with necessary controls to make each unit as foolproof as possible.

The Stamp-O-Matic Press is built for pressures from 2000 lbs. upwards. They are equipped with thermostatically controlled electric heaters. Manufacturer states that since the press is entirely fabricated from steel, the lightness of weight enables the company to make a machine to fit customer's specifications.

Presses can also be supplied for feeding material from the roll, making it possible to do embossing, gold stamping, and die-cutting in one continuous operation at a speed of about 3000 pieces per hr. Average speed of Stamp-O-Matic sheet-feeding machines is about 2500 per hr.

Further information will be supplied by addressing your request to *Printing Equipment Engineer*.

Roll Leaf Stamping Press

THE Model AH roll leaf stamping press has been introduced by Peerless Roll Leaf Company, Inc. The press is designed and built exclusively for roll leaf stamping. Such articles as combs, paint brush handles, plastic caps and hickory tool handles may be stamped. Designing the Model AH, the Peerless engineering staff first considered the various problems presented in the marking of such different products as, for instance, plastic caps and hickory tool handles, of materials varying from fabrics to vulcanized fibres, of stamping speeds ranging from 10 to 60 impressions per minute. Stamping heats and pressures, length of dwell, methods of feeding the work to the press and ejecting the finished work, were all considered.

The Peerless Model AH Press is constructed with a heavy cast iron base and a frame made from $^{3}/_{8}$ in. steel plate. The total weight is 2100 lbs. Moving parts have alemite fittings for easy lubrication. The driving mechanism is housed in the cast iron base and is readily

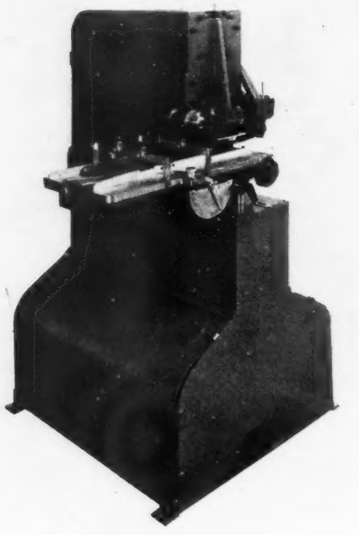


Fig. 1.—View of Model AH, Peerless's new Roll Leaf Stamping Press. Press is 2 ft. 7 in. wide by 3 ft. 9 in. deep by 5 ft. high. Depth of throat opening, 10 in. from front of head to center of chase. Press shown is fitted with chain feed. Supplied with 16 in. diam. dial table Dial table supplied with eight stations with adjustments so the dial will move in 45, 90, and 180 deg. arcs. Press is designed for trademarking and decorating articles made of plastic, wood, fibre, hard rubber.

accessible. All bearings are roller type for frictionless operation. The press is powered by a $^{3}/_{4}$ h.p. electric motor with power transmitted by a Reeves Variable Speed pulley. A hand wheel at one side permits the operator to adjust the press speed as required.

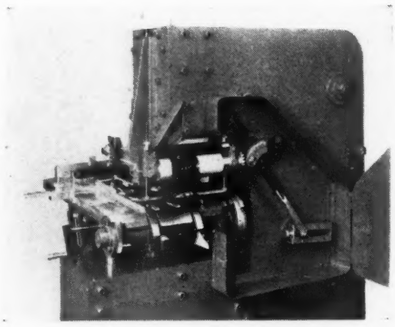


Fig. 2.—Side view of Peerless Model AH Roll Leaf Hot Stamping Press, showing roll leaf adjustment device. Another device permits operator to adjust "pull" of the leaf in $^{1}/_{16}$ in. increments up to the length which is equivalent to the width of the stamping head.

Stamping pressure is regulated by turning a handwheel located at the rear of the press. An arrangement of pivoted levers makes it possible to increase or decrease the stamping pressure while retaining the same amount of dwell on the work. A dial records the degree of pressure adjustment, so that the same set-up can be duplicated whenever required.

The head of the press is set in the lower part of the ram which moves up and down between a pair of adjustable gibs. The roll leaf mechanism is mounted on both sides of the head so that the roll leaf travels from left to right across the face of the heated type or dries set in the chase or mounted on the die plate. At all times the roll leaf is out of the way of the operator, permitting full view of the work being stamped. Press speeds vary but may be regulated to operate from 10 to 60 impressions per minute.

Combination Head and Chase: The head is 6 in. by 7 in. Die plate is 6 in. by 7 in. Inside size of chase is 5 in. by 6 in. Chase may be converted into a die plate by removing wall of chase. Head is fitted with thermometer, heater and thermostat.

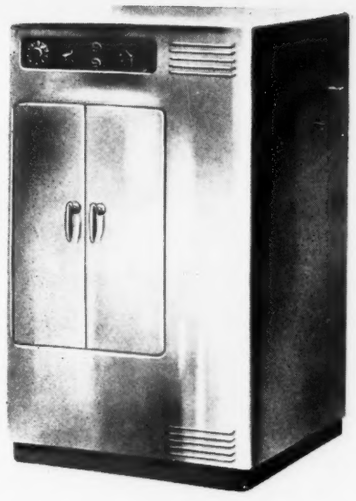
Dial Table: 16 in. dia. Eight stations with adjustment so that dial will move in 45 deg. arcs, 90 deg. arcs, or 180 deg. arcs. This permits the stamping of large articles requiring more room on the table. One-half turn (180 deg. arc) results in the fullest use of the dial table and gives the operator a production speed twice that of a sliding table.

Chain Feed: May be designed to operate under head from front to back of press or left to right. Adjustable side gauges permit feeding articles like combs, paint-brush handles, etc., so that impression may be registered accurately. An impression gauge enables the operator to switch from thick to thin articles or vice versa.

Anhydrator Dries Films Without Heat

OSCAR Fisher & Co. announce development of an improved model of the Anhydrator. In this cabinet may be dried photographic films without using heat. The claim is made that color quality and color balance of multi-layer color films (Ektachrome, Anscolor, etc.) are not changed or modified when dried without heat in the Anhydrator. It is also stated that heatless drying keeps grain size at minimum and this grain-size control materially aids subsequent photographic printing or Graphic Arts reproduction. Emulsions, too, it is stated, are preserved in their best condition since the Anhydrator removes the dangers of emulsion stress, swelling or cracking which might be caused by heat drying methods. Distortion, it is asserted, is avoided by the high-speed low-temperature drying which assures even overall shrinkage.

A full cabinet of films may be dried in an average of 10 min. Floor space required for the Anhydrator is 2 ft. by $3\frac{1}{2}$ ft. Upon installation, the cabinet is ready for operation after plugging-in the



View of Oscar Fisher & Co.'s Anhydrator Cabinet for drying films without the use of heat. Cabinet full of film may be dried in 10 min.

electric cord. No air ducts or architectural remodeling required. The Anhydrator is available with one or two sets of doors opening to the film drying cabinet. Through-wall or inter-department film transfer is easily obtained.

Automatic controls operate the dryer, shut off the air blower and ring the alarm buzzer. During operation, the special anhydrating agent picks up water removed from the films. Mechanism will absorb up to 5 lbs. of water before anhydrating agent must be reactivated. Reactivation is usually done off-shift or after hours, and is controlled by a 24 hr. electric clock timing device which starts and stops reactivation every 24 hrs. at the time selected. Manufacturer states the anhydrating agent will last indefinitely without replacement.

Interchemical Direct Reading Wet Film Thickness Gauge

WHAT has been called a radically new instrument for measuring the wet film thickness of paint, varnish, lacquers and related products, has been announced by Henry A. Gardner Laboratory, Inc. The gauge was developed by Maynard R. Euverard of Interchemical Corporation.

The durability, appearance and other physical properties of paint, varnish, lacquer and other film-forming materials are greatly influenced by the thickness of the films. It is asserted that results obtained by the use of the new Interchemical Wet Film Thickness Gauge are most rapid and accurate.

Manufacturer's description of the gauge is as follows: The Interchemical Thickness Gauge is essentially an eccentric center wheel supported by two concentric wheels as shown in the diagrammatical illustration Fig. 2. Those portions of the gauge influencing its accuracy are machined with extreme care. The dimentions of the measuring surfaces and the calibration marks are checked with Johansson Gauge Blocks, Class B, which are accurate to within 8 millionths (0.000008) of an inch.

With the instrument can be measured wet film thickness within a range from 0 to 4 mils with an accuracy of 0.1 mil by holding the axle of the gauge between the thumb and forefinger, rolling the gauge over the wet film, and reading the calibrated engraved scale on the side of the outer wheel.

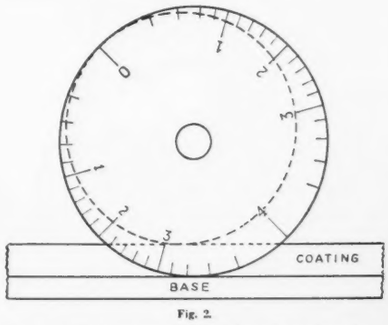


Fig. 2.

Fig. 2.—Diagrammatical drawing showing principle of Interchemical Wet Film Thickness Gauge. Thickness Gauge presently available has a measuring range from 0 to 4 mils with a wheel 2 in. diam. Gauge is direct reading. For explanation of operation see accompanying article. Gauge is made of high-chrome content stainless steel. The accuracy or life of the gauge cannot be adversely affected by repeated immersion in thinners normally employed for cleaning purposes.

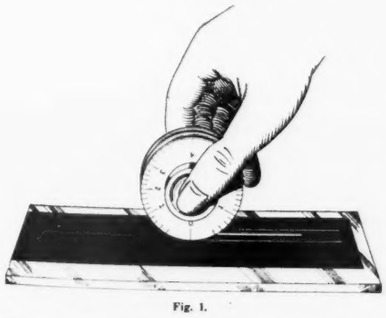


Fig. 1.

Fig. 1.—This drawing shows the Interchemical Wet Film Thickness Gauge held between operator's thumb and forefinger being rolled over a freshly applied film to obtain measurement of thickness of film.

Operation of the gauge is as follows: When placed on a plane surface, the clearance between the inner eccentric wheel and the surface upon which the two outer concentric wheels rest ranges from 0 to 4 mils. In operation, the gauge is placed on a wet film so that the greatest clearance between the eccentric wheel and the film, which is 4 mils (indicated by the engraved mark "4" on the gauge) is directly over the wet film, Fig. 2. The gauge is rotated over the film one-half revolution in one direction toward the minimum reading indicated by the engraved mark "0" on the gauge. During rotation the eccentric wheel will at some intermediate point contact and "pick up" the wet film on its radius. The gauge is removed from the film and the initial "pic -up" point of the material is read to the nearest 0.1 mil on the engraved scale. This reading may be checked by repeating the above operation and rotating the wheel in the opposite direction from the first determination, as the instrument is calibrated to make film thickness measurements when rotated in both directions. If a determination has been made on each half of the wheel, the average of the two readings may be taken as the true wet film thickness.

The Interchemical Wet Film Thickness Gauge is available in the following ranges: 0 to 2 mils for use on very thin coatings; this range is believed to be optimum for use in the metal decorating trade. 0 to 4 mil gauge. 2 to 12 mil gauge, smallest graduation is 0.5 mils. 10 to 30 mil gauge, smallest graduation is 1.0 mils.

Further information with respect to exact applications of Interchemical Wet Film Thickness Gauges may be obtained direct from Henry A. Gardner Laboratory, Inc., 4723 Elm St., Bethesda 14, Maryland, or *Printing Equipment Engineer* will gladly transmit your request to the Gardner Laboratory.

Mailbag Holder

A STREAMLINED balanced-position Mailbag Holder, is being introduced by Commercial Controls Corp. Made of tubular steel for maximum strength with minimum weight, the holder is adjustable in height from 36 in. to 40 in., fitting any size mailbag.

Commercial Controls Corp. introduces mail bag holder shown in this illustration.

A free-swinging bracket holds the bag open at a convenient angle so that mail can be tossed, thrown or dropped, and it is in the bag. Steel pegs so placed to fit the average mailbag grommets suspend the bag in position. It may be moved easily when the mailbag is full. Occupies 18½ in. by 18½ in. floor space.

Human Element

To Receive Attention at Pittsburgh ANPA Mechanical Conference

PRINTING EQUIPMENT ENGINEER is glad to note that the entire first day's sessions of the ANPA Mechanical Conference are to be devoted to discussions of the human element. The twentieth annual ANPA Mechanical Conference will be held at Hotel William Penn, Pittsburgh, on Monday, Tuesday and Wednesday, July 19, 20 and 21.

Probably for the first time in its history, the ANPA Mechanical Conference will discuss the human element angle in newspaper plant operation. In the past, this most important facet of newspaper plant management has been neglected. This publication has always insisted that technology in itself is highly important, but without employee cooperation improvement in individual production is frustrated.

This year's program is in charge of a committee of which Edwin H. Evers, Production Manager of the St. Louis *Post-Dispatch* is chairman. The Monday program will be conducted under the head: *Industrial Relations.*

First, Chairman Evers will explain the purpose of the meeting. Immediately following will be an address *A Need for Economics Understanding*, by Ray S. Tannehill, Secretary-Treasurer, Bell Telephone Co. of Penna. The next feature will be a film: *This Is Our Problem*, prepared by ANA-AAAA Committee on Improvement of Public Understanding of Our Economic System; presented by C. C. Carr, Public Relations Director, Aluminum Company of America.

The chairmen for the second (afternoon) section of the industrial relations program will be F. W. Schaub, E. H. Evers and R. R. Cranmer.

The Monday afternoon session should hold much of interest for the newspaper mechanical and/or production executive. Dr. Ralph Lee, Public Relations Dept., General Motors Corp., will discuss *Humanics in Printing.* Dr. Lee has addressed many printers' groups in various parts of the country recently. His knowledge of human nature is expansive—and he can put his message across. He likes printers and knows how to talk to them.

Other addresses by in-plant executives should also be valuable to ANPA executives. The fascinating subject: *The Employee's Stake in Scientific Management*, will be discussed by Robert I. Miller, Standardization Div., Curtis Pub. Co. An address which comes right out of a newspaper plant is that of Robert H. Spahn, Oklahoma (Okla.) Pub. Co. He will talk on *Training and Personnel in a Newspaper Plant.*

A sobering address will be delivered by T. F. Mowle, Comptroller, *Wall Street* (N.Y.) *Journal.* His subject is *Impact of Rising Costs on the Newspaper Business.* The final feature of the Monday program is a film and address by National Foreman's Institute, Deep River, Conn.

Tuesday's Program

Chairmen for the Tuesday morning session are William Baumrucker jr., W. P. Pape and R. S. Stratton.

First speaker on Tuesday morning will be ANPA Research Director C. M. Flint. He will discuss *The ANPA Research Program. Fire Hazards in Newspaper Plants* is the subject of R. B. Quackenboss, Chief Engineer, Rollins-Burdick-Hunter Co., Chicago.

Production Manager John W. Park, Chicago *Tribune*, will address the meeting on *Flammability of Press Rollers and Blankets.*

The latter part of the meeting no doubt will be interesting to newspaper mechanical executives. The subject is *The Problem of Stereotyping.* Discussion will be led by L. J. Griner, Production Manager, Detroit *News.*

Tuesday Afternoon

Chairmen at this session will be A. H. Burns, T. A. Corcoran and B. F. Garrity.

By means of slides, W. E. Turner, Truck Div., General Motors, will discuss *How To Select the Proper Truck.* Wire Tying Machines will, in turn, be discussed by John A. Gorman, Signode Steel Strapping Co.; Adolph Larsen, Gerrard Steel Strapping Co., and T. R. Sykes of the Toronto *Star.* C. P. McArthur, the Dick Mailer, will tell about *Recent Improvements in the Dick Mailer.*

Tuesday Night

At 8 o'clock, Tuesday night, C. M. Flint, Director of ANPA Research, will present an informative discussion on *New Processes and Techniques of Producing Newspapers.*

Wednesday Morning

Chairmen for this session will be J. J. Shea and M. A. Hagan.

Discussion on *Pressroom Management* will be led by Earl Weiskittel, Pressroom Supt., Youngstown (O.) *Vindicator.* A film entitled *The Inside Story*, will be presented by E. H. Gould, Engineer, Socony-Vacuum Oil Co. K. R. Burchard of ATF will tell about *Lens-O-Matic—A New Halftone Exposure Control.* Photoengraving Supt. Maurice A. Hagan of the Philadelphia *Inquirer*, speaks on *Effective Use of One and Two Colors. The New Cold Grid Printer* is the subject assigned to A. J. Powers jr., Chemco Photoproducts Co.

Wednesday Afternoon

J. W. Park, W. L. Fanning and J. L. Blake will be chairmen for the final and closing session on Wednesday afternoon.

The Advertising Copy Problem will be discussed by C. H. Ruth jr., of the Washington (D.C.) *Star.* There will be a discussion on *Composing Room Operation*, led by Charles M. Wolf, Pittsburgh *Press.*

Through the medium of slides, Ben Dalgin of the New York *Times*, will present *Report of the ANPA-AAAA Joint Committee on Newspaper Printing.* He will be assisted by Ernest Donohue of Batten, Barton, Durstine & Osborn, New York.

VISUAL CONTROL

Installed in New Jersey printing plant enables executives to know instantly the progress of each job through plant

By S. K. HARGIS

THE many factors which make for a smooth production flow in the job printing plant must, in one form or another, be in view of the production man. Otherwise delivery targets may be missed, important customers and accounts may be placed in risk. As a rule, paper and book records give what is past history on any given job situation at the moment.

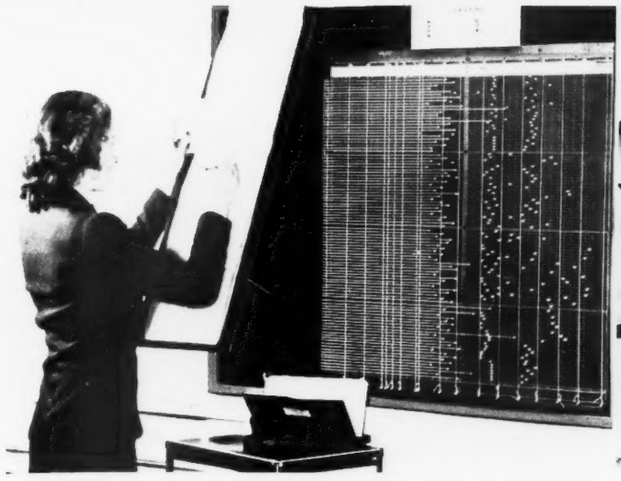
To meet this condition—to provide at a glance record of production schedules and machine loading, The Nevins Church Press, Bloomington, N. J., has adopted the visual (board) control system which was inaugurated and developed during the war to speed up production and facilitate other activities. (Suggested reading on this topic, *Visual Controls In Business*, Wassell, publisher, Westport, Conn.)

What the printing production man needs is a projection of governing factors in relation to each and every printing job from the time it enters the plant until delivery target is accomplished. If it is necessary to dig into files and records then compare notes and arrive at a conclusion much time is wasted. Another thing. The visual control or board system makes it possible to quickly spot delays or snags and take the proper steps to remedy them by correcting the cause.

The visual control board used in this case is simple, and can usually be operated by an intelligent routine office worker. The flexibility of the method will be easily realized from the following description:

A visible index is located at the left side of the board. It is used to hold the permanent card records of the items or elements under control. There are 100 card pockets on each panel. A legend is located at the top of the board, and is used to show the meaning of the pegs and cords.

A peg hole section is placed on the main body of the board—for the purpose of visibility to analyze information on the cards by means of the pegs and cords. A heading strip is attached across the top of the peg hole section—to reveal quantity and/or time represented by peg holes from left to right. There is one tape peg for each item in the visible record panel, and each is numbered to correspond with the card pocket (at its left). Each peg is attached to a cord which pulls



At left is shown view of one of the boards comprising visual control system in Bloomington, N. J. printing plant. Status of any job going through the plant may be obtained at a glance.

In a New Jersey commercial printing plant management and production executives are enabled to determine whether or not the progress of each job is satisfactory and whether or not the job will be delivered on time.

outward from the board so that it may be extended from left to right on the board as needed.

The signal pegs are to be located, according to procedure, in the various peg holes, their meaning being noted on the legend at the top of the board. The "today line" is attached vertically to the board and is moved periodically from left to right in accordance with the time element in the procedure.

Thus, in making it possible to exert control in this kind of an operation, a visual method such as this offers certain definite advantages. It provides, at a glance, a knowledge of all pertinent facts and figures, eliminated from the executives' attention situations which are in a normal condition, spotlighting the bad points and thereby reducing, immeasurably, the amount of time necessary to make analyzed reports.

It flashes the facts to all interested parties at one time, is flexible and can be adapted quickly to any problem. It eliminates, according to the users, or greatly reduces the amount of time necessary for the accumulation of usable facts from a routine paper record.

In fact, it is a well known maxim that "in any kind of business operation, the greatest obstacles to efficiency are bottlenecks that appear from nowhere, and always develop at the wrong time". However, it is also true that bottle-necks do not just casually happen; they are the slow, constant, growth of weak production or operating control which reflects the need for improvements. Students of postwar business controls generally agree that, in view of these facts, the remedy at hand is to have a stronger link of production or operation functions with the central control that gives an up-to-the minute picture of your production—graphic presentation of past, present and future operations, singly, combined, and in proper sequence one to the other.

As users of such systems have pointed out: When production (or as the case may be, operation) is under accurate central control, there's far less waste of time and money, because men, resources and/or necessaries are used to their fullest capacity and to save valuable man-hours, conserve vital executive time are among the results of efficient production.

Perhaps before the war, while these needfuls and their objectives were appreciated and even sought in industry, business and transportation through various methods, the postwar world is becoming constantly more visual-minded with the result that methods of operation in all kinds of enterprises today are converging to the point of the graphic as in the instance described in this article.

Progress in the Offset Process

By W. H. WOOD*

**Research Director, Harris-Seybold Co. Abstracts from address delivered before Third District Conference, International Association of Printing House Craftsmen, Rochester, N. Y., May 1948.*

THE modern offset process, like letterpress and gravure processes, is dependent upon photography for the preparation of the printing plates. Developments in modern photography that will improve the offset process are being announced frequently. There are improvements in point of light sources for making halftone negatives and positives. There are developers and fixers for greater reliability and longer solution life.

New Plate Coatings

Offset platemaking has not been forgotten by the research investigators. Since the end of the War, new plate coatings have been developed and some of these have reached the market; others will follow in the near future. The trend seems to be away from the protein substances, such as egg albumen and casein and towards gum-like synthetic high polymers. Some processes use no coating materials at all; instead, the light sensitive substance itself, such as a special dye-like material, forms the ink receptive printing image. These materials make it possible to coat printing plates months before they are to be used, allowing storage and dating like photographic film.

Better Base for Image

Improvements have been made in the chemistry of metal surface treatments to form better bases for the lithographic image. Plates of zinc or aluminum are chromated or phosphated before coating with light sensitive coatings. Easier coating and a better working plate result.

Plate Etches and Fountain Solutions

Synthetic high molal acidic materials, such as carboxy-methyl cellulose and starch, carboxy-cellulose and carboxy-gum are coming into use here and abroad for plate etches and fountain solutions. They are certain to displace gum arabic from its time honored position as an indispensable ingredient for offset printing.

Two-Metal Plates

Two-element plates, commonly known as bi-metallic plates are finding use on

long run jobs, especially on web-fed presses. There are many kinds of these two-metal plates. Probably one of the best employs chromium on copper. The chromium surface is quite inert chemically, and hence resists oxidation and consequent plate scumming unless the chromium is accidentally depassivated. The copper will accept ink very readily after being given a superficial oxide or sulfide surface, and in case of damage this surface can be renewed readily without affecting the chromium non-printing areas. The printing life of these bi-metal combination plates may equal or exceed that of letterpress plates.

For shorter runs, the deep etch plate is still predominant. With new type arabate coatings, dot reproduction duplicates the positive with great fidelity. With modern vinylite base lacquers, plate life is ample for any run up to several hundred thousand impressions.

The science of offset press design is keeping pace with improvements in the process. Speeds of 4000 to 6000 impressions per hour are now common. The stream feeder has been instrumental in the attainment of such speeds. Web offset presses of high surface speeds will be more commonly seen in offset printing plants in the near future. Paper makers and ink makers are working now on research problems posed by web press operation, such as ink drying and paper stretch.

Synthetic Elastomers for Blankets

Press blanket manufacturers have available synthetic elastomers for blankets that are superior to natural rubber. One of the most promising of these is the new low temperature rubber, a real advance over Hevea rubber. Silicone polymers have also been tried for blankets and found to have some properties better than natural rubber.

Static Eliminators

Paper static eliminators will be seen more frequently in the modern offset shop. One of the newest of these owes its effectiveness to the ionization produced by emitted alpha rays. When the world has grown less warlike, and atomic war does not threaten, two new elements which are products of the atomic furnaces, will be available for such peaceful uses as press static elimination. These two elements, Americium and Curium, are such potent alpha ray sources that a press equipped with devices carrying traces of these elements would be cured of paper static troubles for the life of the press, without danger to, or attention by, the press operator.

Science is too exact to be much affected by prognostication. However that may be, we can still look forward to accelerating progress in offset printing.

List of Exhibitors

At 1948 ANPA Mechanical Conference to be held at the William Penn Hotel, Pittsburgh, Pa., on Monday, Tuesday and Wednesday, July 19, 20 and 21.

Booth Nos.	
1- 2 inc.	Imperial Type Metal Co., Chicago, Ill.
3	H. B. Rouse & Co., Chicago, Ill.
4- 5 inc.	Teletypesetter Corporation, Chicago, Ill.
6	The Challenge Machinery Co., Grand Haven, Mich.
7- 8 inc.	J. A. Richards Co., Kalamazoo 13F, Mich.
9-10 inc.	Eastman Kodak Co., Rochester 4, N. Y.
11-12 inc.	American Type Founders Sales Corp., Elizabeth B, N. J.
13-14 inc.	Metals Refining Co., Hammond, Ind.
15-16 inc.	Hammond Machinery Builders, Inc., Kalamazoo 54, Mich.
18-19 inc.	Linotype Parts Co., South Hackensack, N. J.
20-21 inc.	Sam'l Bingham's Son Mfg. Co., Chicago 5, Ill.
22-23 inc.	Lake Erie Engineering Corp., Buffalo 17, N. Y.
27	Elwell Parker Electric Co., Cleveland, O.
28-30 inc.	Vandercook & Sons, Inc., Chicago, Ill.
31	Printing Equipment Engineer, Cleveland, O.
32	John W. Griffiths, New York, N. Y.
33-34 inc.	Sta-Hi Corporation, Los Angeles, Calif.
35-36 inc.	Consolidated Photo Engravers Equipment Co., Chicago, Ill.
37-38 inc.	Ludlow Typograph Co., Chicago, Ill.
39	Atlantic Zinc Works, Brooklyn, N. Y.
40-42 inc.	Chemco Photoproducts Co., Glen Cove, N. Y.
43	Printing Equipment Corp., Joliet, Ill.
44	Kellogg Switchboard and Supply Co., Chicago, Ill.
45	General Plate Makers Co, Chicago, Ill.
46-48 inc.	The Morrison Co., Milwaukee, Wis.
49-51 inc.	R. R. Robertson Co., Chicago, Ill.
52	Tingue, Brown & Co., New York, N. Y.
53	Lewis-Shepard Products, Inc., Watertown, Mass.
54	Arthur H. Gaebel, Inc., Larchmont, N. Y.
55-56 inc.	Western Newspaper Union, Pittsburgh, Pa.
57	W. A. Brown Mfg. Co., Chicago, Ill.
58	Stereotex Machinery Co., Stamford, Conn.
59-60 inc.	Bourges, Inc., New York, N. Y.
61	Graphic Arts Appliance Corp., Aurora, Ill.
62	Fairchild Camera and Instrument Corp., Jamaica, N. Y.
63-64 inc.	Frone Engineering, Inc., Rutherford, N. J.
65-66 inc.	Federated Metals Div. American Smelting and Refining Co., New York, N. Y.
67-68 inc.	Wood Newspaper Machinery Corp., New York, N. Y.
69-70 inc.	Reilly Electrotype Co., New York, N. Y.
71-73 inc.	United American Metals Corp., Brooklyn, N. Y.
74	Ralph C. Coxhead Corp., New York, N. Y.
75-77 inc.	General Electric Co., Schenectady, N. Y.

Pittsburgher Room—Wallastar Newspaper Bundling and Tying Machine.

LETTERS
TO THE EDITOR

Our Error

Dear Editor:

In a recent issue of *Printing Equipment Engineer*, it is stated in the article *Prevents Paper Wrinkling on Heavy Bleed Border Jobs* that wrinkles in sheets on which a continuous heavy border is being printed may be eliminated by drilling holes under the border to relieve the air pressure at the time impression occurs.

This is a new one. The wrinkling can occur on platen presses where the platen meets the entire border at one time. Holes drilled horizontally in the mounting base just under and also vertically close to the cut itself so that the two holes meet to form a channel through which the air may escape, will relieve the air pressure. But on a cylinder press where the cylinder crosses the form with about ⅛ in. contact at any given point, where in the Sam Hill can air pressure be built up?

This is just a friendly way of saying that a few of the boys as well as myself would be glad to hear more about this.

Awaiting your reply, I remain

Cordially yours,
George Kraemer
13994 Hazelridge
Detroit 5, Mich.

Reader Kraemer is right. The drilling of the holes in the mounting base as suggested by Mr. Castanzo to permit escape of the air was intended for printing on platen presses only where the tympan and the border cut meet simultaneously with overall contact. In the article it should have been stated that the kink was intended only when printing on platen presses. Our omission.

Consolidates Management

William Recht, Vice President of Sun Chemical Corp., has announced consolidation of management for the Fuchs & Lang and Rutherford Machinery divisions.

The name Fuchs & Lang has been identified with lithographic inks and supplies. Rutherford has specialized in machinery for the lithographic industry.

Color Printing with Odor

In its Tuesday, May 2 issues, the Memphis (Tenn.) *Press-Scimitar* published an unusual color advertisement for The Humko Co. of Memphis. The advertisement contained an illustration of a chocolate cake printed in brown ink. The brown ink was impregnated with chocolate-odor element. On Wednesday, May 19, the odor was still quite distinct. The balance of the advertisment was printed in black and blue ink. Readers were invited to smell the cake illustration in the advertisement.

R. J. Richardson, Production Manager of the *Press-Scimitar*, also reports that the firm's other paper, *The Commercial Appeal*, printed an advertisement in color for the Goldsmith firm in Memphis. The advertisement carried a large bouquet of pink carnations. In this instance, too, the perfume element was mixed directly with the ink. Mr. Richardson is thinking of spraying the high-odor elements directly on the paper web as it comes through the press rather than to mix it with the ink. In the case of the chocolate odor, however, the odor producing element can be applied more effectively by mixing directly into the ink.

Advisory Council Meets

The Advisory Council on Graphic Arts Education met on April 29 at Carnegie Institute of Technology during the first post-war reunion of Carnegie Printing Alumni. The Council is comprised of delegates from national and international associations in the Graphic arts field, with representatives of Carnegie and other educational institutions. It was organized in 1938 to serve primarily as an advisory and liaison group to aid Carnegie's Department of Printing and to support and advise other educational activities. At the Pittsburgh meeting about 20 Graphic Arts organizations were represented by designated officers.

Moves Buying Dept.

Sun Chemical Corp. announces that its Buying Department has been moved from 100 Sixth Ave., New York 13, N. Y., to the Sun Office Building, 10-10 44th Ave., Long Island City 1, N. Y. Telephone is STillwell 6-1100.

If you don't know the maker or the source of supply, just ask *Printing Equipment Engineer* where it can be obtained.

Conference Dates (*with organization names and principal officers*)

American Photo-Engravers Association — Hotel Statler, Cleveland, Oct. 7, 8 and 9. Frank J. Schreiber, Commissioner, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference — William Penn Hotel, Pittsburgh, Pa., July 19, 20 and 21, 1948. J. L. Stackhouse, Chairman, Easton, (Pa.) *Express:* Walter E. Wines, Manager, ANPA Mechanical Dept. 370 Lexington Ave., New York 17, N. Y.

Great Lakes Newspaper Mechanical Conference—Gibson Hotel, Cincinnati, January 16, 17, 18, 1949. President C. M. Kirk, Stereotype Supt., Detroit *News*; Secretary Al P. Oberg, Composing Room Supt., Flint (Mich.) *Journal*.

Illinois Newspaper Mechanical Conference — Faust Hotel, Rockford, Ill., Saturday and Sunday, September 25 and 26, 1948. President, Earl Anderson, Supt., Rockford Consolidated Newspapers, Rockford, Ill. Secretary, Howard Colton, *Daily Pantagraph*, Bloomington, Ill.

International Association of Printing House Craftsmen —Hotel Cleveland, Cleveland, August 8, 9, 10, 11, 1948. President, A. Gordon Ruiter, Supt., Forbes Lithograph Mfg. Co., P. O. Box 513, Boston, Mass. Secretary, Pearl E. Oldt, 18 East Fourth St., Cincinnati 2, Ohio.

International Typographic Composition Association—Hotel Nicollet, Minneapolis, Minn., September 16, 17, 18, 1948. Frank M. Sherman, Executive-Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference— 1949 conference will be held in Mason City, Ia. Hotel and dates to be announced later. President, Ken I. Waughtal, Kayenay Engraving Co., Mason City, Ia.; Secretary, Paul F. Kamler, Mechanical Supt., Clinto (Ia.) *Herald*.

Lithographers National Association — Greenbrier Hotel, White Sulphur Springs., W. Va., July 21, 22, 23 and 24, 1948. W. Floyd Maxwell, Executive Director, 420 Lexington Ave., New York 17, N. Y.

Missouri Newspaper Mechanical Conference — Tiger Hotel, Columbia, Mo., September 11 and 12, 1948. President Beryl A. Troutman, *Courier-Post*, Hannibal, Mo., Secretary-Treasurer O. K. Hammitt, *Monitor-Index*, Moberly, Mo.

National Association of Litho Clubs — Washington, D. C., April 29-30, 1949. President, Albert Tucker, Sauls Lithograph Co., Washington, D. C.; Secretary William J. Stevens, 1776 Broadway, New York 19, N. Y.

National Association of Photo Lithographers — Netherland-Plaza Hotel, Cincinnati, Ohio, Sept. 15, 16, 17, 18, 1948. Walter Soderstrom, Executive Secretary, 1776 Broadway, New York 19, N. Y.

National Graphic Arts Education Association — Hotel Pennsylvania, New York, N. Y., June 21, 22 and 23, 1948. Byron G. Culver, President; Fred J. Hartman, Educational Director, 719 Fifteenth St., N. W., Washington 5, D. C.

National Graphic Arts Exposition—International Amphitheatre, Chicago, September 24 to October 7, 1950. National Graphic Arts Exposition, Inc., A. E. Giegengack, President. Fred W. Hoch, Secretary, 461 Eighth Ave., New York 1, N. Y.

National Printing Equipment Association, Inc. — Edgewater Beach Hotel, Chicago, Ill., October 20, 21 and 23, 1948. James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — Hotel Statler, Boston, Oct. 23 and 24, 1948. President, Wm. H. Porter, Mech. Supt., New Haven (Conn.) *Register*. Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

New Jersey Press Association Mechanical Conference —1948 Conference to have been held in Atlantic City, N. J. in June has been cancelled because of inability to secure hotel reservations. President Neal E. Dyer, Mechanical Supt., Camden (N. J.) *Courier-Post*.

Northwest Mechanical Conference — Hotel Radisson, Minneapolis, Minn., February 12, 13, 14, 1949. President, Chas. R. McGuire, Asst. Mechanical Supt., Minneapolis (Minn.) *Star* and *Tribune;* Secretary-Treasurer, Henry Magnus, Machinist, Minneapolis (Minn.) *Daily Times*.

Pacific Mechanical Conference — Roosevelt Hotel, Hollywood, Calif., May 13, 14, 15, 1949. President, Harold Winn, Hollywood *Citizen-News;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News*.

Pacific Society of Printing House Craftsmen — Mission Inn, Riverside, Calif., June 25 and 26, 1948. E. Deo Paul, President, 430 Court St., San Bernardino, Calif.; Blair Lord, Secretary-Treasurer, 3650 Fairmount Blvd., Riverside, Calif.

PNPA Mechanical Conference — William N. Hardy. Manager, PNPA, 209-213 Telegraph Bldg., Harrisburg, Penna. Chairman Mechanical Committee, E. O. Davies, Mechanical Supt., Harrisburg (Pa.) *Patriot* and *Evening News*.

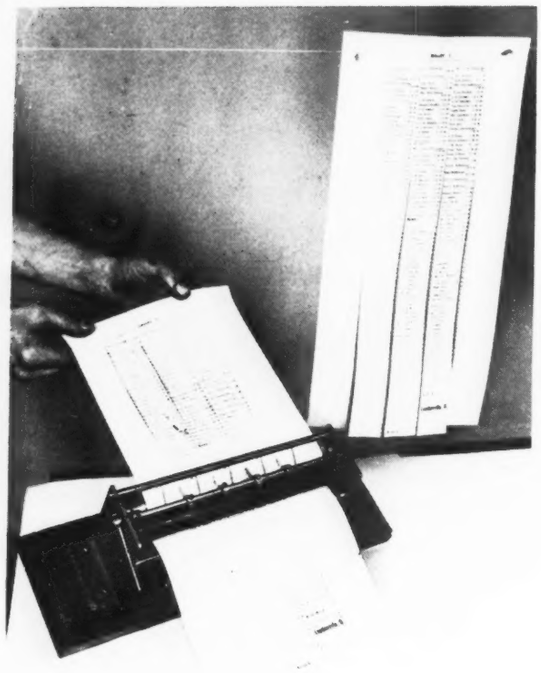
Printing Industry of America—Edgewater Beach Hotel, Wed. to Sat. inclusive, Oct. 20-23; James R. Brackett, General Manager, 719 Fifteenth St., N.W., Washington, D. C. 1949 PIA Convention — Hotel Biltmore, Los Angeles, Nov. 14-17, 1949.

SNPA (Eastern Div.) Mechanical Conference—Walter C. Johnson, Manager SNPA, P. O. Box 1569, Chattanooga 1, Tenn. Chairman Executive Committee, I. J. Gardner, jr., Composing Room Supt., Chattanooga (Tenn.) *Times*.

SNPA (Western Division) Mechanical Conference—Secretary, C. W. Tabb, 723 Texas Bank Bldg., Dallas, Tex.

Southwestern Photo-Engravers Association — Roosevelt Hotel, New Orleans, La., June 27, 28, 29, 1948. Executive Secretary, Virginia Nichols, 3621 Country Club Circle, Fort Worth 4, Texas.

Southwestern Graphic Arts Conference—E. J. Deubner, Executive Secretary, 130 No. Volutsia Ave., Wichita 8, Kan.



View of Bachmann mailing list galley proof rotary slitter. At upper right is a proof which has been slitted in the machine and is ready to be pasted into a continuous strip for insertion in hand-mailing wrapper label cutting and pasting machine. As the proof is pulled between the two rolls, the safety razor blades cut it into strips.

Mail List Slitter

IN THE March issue of *Printing Equipment Engineer* appeared an article in which was described a gadget for cutting mailing list proofs into strips previous to pasting them into a continuous strip for insertion in a hand wrapper labeling machine. The device described in that article was devised by Production Manager J. K. Mooney and was made by Cecil Grimshaw, mechanic, in the plant of the Cumberland (Md.) *Times News*.

Subsequently, we have received from M. G. Bachmann, Mechanical Superintendent of the Ashland (O.) *Times-Gazette*, a rotary mailing list proof slitting mechanism.

Mr. Bachmann states that several years ago he made a rotary cutting device as shown in the accompanying illustration for cutting mailing proofs into strips.

In the plant of the *Times-Gazette* the mailing galleys are arranged to contain three 9 pica columns. The space between the columns is 6 pts.

The machine itself consists of a substantial metal base in which are mounted two steel rolls, 1 in. by 10 in. long. The lower roll is covered with a line-composing machine rubber roll. The top roll, as will be seen in the accompanying illustration, is grooved. The grooves are spaced 9½ picas apart in harmony with the spacing of the columns in the mailing list galleys. Mounted in the frame and above the upper grooved roll is a 5/16 in. steel rod with four adjustable or sliding steel collars. A safety razor blade was soldered to each collar in angular relationship to the galley proof. The cutting blades may be raised or lowered onto the galley proof by means of a lever mounted upon the left end of the 5/16 in. rod.

Beneath the lower rubber covered roll is a guide which assists the operator in starting the galley proof between the rolls so the blades will cut midway between the type columns.

To operate the device, the mailing list proof is started between the rolls, the cutting blades are lowered between the grooves in the upper roll, and the proof is pulled through by hand.

Wants to Cooperate with U.S. Companies in New Developments

J. C. SANDERSON of McCorquodale & Co., Ltd., 15 King St., London EC2, England, has announced that a research laboratory to serve the McCorquodale Group of printing companies is being set up. D. C. Gresham, FRPS, who, until joining McCorquodale, was in charge of photomechanical research at Kodak, Ltd., Harrow, is in charge of the research laboratory.

The McCorquodale Group prints by letterpress, offset and gravure. It is intended to carry out a planned program of research to improve existing printing techniques and to investigate and develop new processes and inventions connected with printing.

Mr. Sanderson states so many new things have been brought out in the United States during the past few years that the task of evaluating them will be a considerable task.

The McCorquodale Laboratory is anxious to cooperate with any companies in the Graphic Arts in the U. S. who maintain a similar research unit. Mr. Sanderson says his organization believes benefits would occur to both sides by the exchange of ideas. Inventors who have new developments which they are trying to place are invited to get in touch with Mr. Gresham at the McCorquodale address given above. The laboratory is interested in all Graphic Arts developments.

PIA Research

THE Board of Directors of the Printing Industry of America and the executive committees of UE and MP Sections, met in Hot Springs, Va., during the week of April 19. More than 100 printers from 50 printing centers attended the sessions.

Among the many reports presented was one by Frank Pfeiffer, chairman of PIA's Research Committee. It was revealed that in addition to the six research monographs recently published, four additional monographs are ready for publication and more than a dozen others are being reviewed.

Discussing the total problem of research in the industry Mr. Pfeiffer said that the problem right now "seems to be the finding of means of organizing information about new products, special developments, and new methods in such a way that all of our employers may be aware of them . . . We should like to develop a continuous reporting system, perhaps on a quarterly basis, of new equipment, methods and research under way."

Mr. Pfeiffer said "We are in the midst of a 'printing revolution'. There is hardly an item of our productive processes that will not be materially changed over the next few years. I am not saying that this 'revolution' will occur over night; but it may well occur sooner than we have anticipated. I can state without qualification that our present machines and methods are going to change—and are changing—fairly fast. It is going to be a matter of continuous change at a faster rate than has been the case in the past."

NAPL Convention

The Sixteenth Annual Convention of the National Association of Photo-Lithographers will be held September 15 through 18, 1948 in the Hotel Netherland Plaza, Cincinnati, Ohio. The convention will run for four days. Fifty-eight exhibit booths will be set up, 54 of these having been sold to companies who will display equipment such as cameras, line-up tables, temperature control sinks, arc lamps, proof press, etc. Suppliers will feature roller covering material, film, chemicals, ink, and many other items.

Walter E. Soderstrom, Executive Secretary of the NAPL, states that the principle talks at the convention sessions will deal with lithographic labor relations, costs, equipment, production and personnel.

Albert Tucker, President of the National Association of Litho Clubs, advises that the local Cincinnati Litho Club will sponsor the all-day Saturday technical sessions with the National Litho Clubs represented by various local clubs participating in the Saturday Technical Session.

Form Technical Group

Technologists in lithographic and allied industries organize to improve coordination and dissemination of research knowledge

FOR the past several years many individual technical men in the lithographic and allied industries have suggested the desirability of an independent group of technologists who could meet for technical discussion of mutual or related research and development problems. The need for an organization of physicists, chemists, engineers and other recognized technical men engaged in research and development not only in lithography but also in such allied industries as illumination, metals, electronics, photography, paper, etc., has long been felt.

Action toward the organization of such a group was taken at the recent three-day technical forum of the LTF Research Committee in Chicago. The organization as yet is nameless.

The aims and functions of the new organization were discussed at the night session at which Dr. Frederick H. Forst, Research Director of the S. D. Warren Co., acted as Chairman. It was generally agreed that the organization could function most efficiently if it were autonomous and not affiliated with any other organization, with membership being based entirely on the qualifications of individual men. The probable viewpoint of management toward such a group was expressed by Randolph T. Ode, President of the Providence (R. I.) Lithograph Co. and Ernest E. Jones, President of the Graphic Arts Corp., of Ohio.

It was pointed out that the new group will in no way duplicate or dilute any organization now in existence and further, that it was not the intent of the group to ask for information on possible "secret" product research. The primary interest is in basic research data which has been assembled in one industry and with further development along other lines, might have application to the problems of the lithographic industry.

Yearly meetings in conjunction with other national meetings are contemplated at which members will present technical papers on work which they have done in their particular field. This will prevent the possibility of needless duplication of research efforts and promote a better understanding and cooperation between many of the members and groups who now work independently.

In the preliminary organizational meeting, Michael H. Bruno, Research Manager of the LTF was elected President; William H. Wood, Technical Director of the Harris-Seybold Co. was elected Vice President, and George Wilhelm of Rand-McNally, was elected temporary Secretary-Treasurer. A five-man Board of Directors will be chosen by the President. It was further decided that the first Board should be made up of men in the Mid-west area to facilitate meetings and the setting up of the constitution and by-laws for suggestions and approval by the membership. Organization is expected to follow lines similar to those of TAPPI although on a considerably smaller scale.

Men who attended the organizational session included:

W. R. Barber, Crown-Zellerbach Corp.
A. W. Beecroft, Rolph-Clark-Stone.
Kenneth O. Bitter, Gamse Litho Co.
Don H. Black, Western Printing & Litho.
William Brauer, Brauer & Son, Inc.
Robert H. Butler, Fuchs & Lang.
Arthur W. Cornell, Forbes Litho Mfg. Co.
R. E. Damon, Atlanta Litho Co.
Paul W. Dorst, Cincinnati Litho Co.
I. Eachus, Jr., Macbeth Arc Lamp Co.
Anthony L. Ensink, Davidson Mfg. Corp.
William H. Falconer, Eastman Kodak Stores.
Paul W. Felt, Brown & Bigelow.
Merrill N. Freund, Spaulding-Moss Co.
Dr. Frederick H. Frost, S. D. Warren Co.
Andrew J. George, Litho Research Cons. Serv.
Dr. A. George, Sinclair & Valentine.
William V. Gough, General Electric.
Alfred Grupp, Meyercord Company.
E. Gurin, Rapid Roller.
Bernard R. Halpern, Zarkin Machine Co.
George S. Hammer, Forbes Litho Co.
Carl B. Harris, ATF.
Dr. P. J. Hartsuch, LTF.
George H. Hupman, General Electric.
Frank Ireland, Brown & Bigelow.
Ernest E. Jones, Graphic Arts Corp. of Ohio.
M. S. Kantrowitz, Government Printing Office.
Chas. F. King, U. S. Printing & Litho Co.
J. W. King, Rolph-Clark-Stone.
John L. Kronenberg, S. D. Warren Co.
H. R. Leedy, Graphic Arts Corp. of Ohio.
Joseph W. Mazzaferri, Colorcraft Company.
Fred W. K. Miller, U. S. Printing & Litho.
John Murphy, Bridgeport Engravers Supply Co.
Frank A. Myers, Copifyer Litho Corp.
Randolph T. Ode, Providence Litho Co.
Charles D. Oughton, Battelle Memorial Institute, Graphic Arts Research Div.
D. J. Pelletier, American Can Co.
Frank Preucil, Gerlack-Barklow Co.
R. F. Reed, LTF.
A. P. Reynolds, S. D. Warren Co.
Robt. D. Roosen, H. D. Roosen Co., Inc.
Robert E. Rosselle, Engineering Research & Development Lab., Alexandria, Va.
Dr. R. M. Schaffert, Battelle Memorial Institute.
Richard F. Shaffer and George Schlegel, Schlegel Litho Co.
Benjamin E. Sites, Miehle Printing Press Co.
B. J. Taymans, PIA.
Philip E. Tobias, Edw. Stern & Co.
Albin Twardowicz, Lord Baltimore Press.
C. H. Van Dusen, Addressograph-Multigraph.
Russell B. Waddell, National Process Co.
Wm. C. Walker, National Ink Research Institute.
Chas. Weber, National Bureau of Standards.
George Wilhelm, Rand McNally Co.

Issues Newspaper in Record Time

On Monday night, May 10, a devastating storm swept through a sector of northern Ohio. Electrical power was discontinued and was not resumed until Tuesday afternoon at 3:09 o'clock in the Painesville (O.) area. Without electrical power for eight of the normally busiest hours of a newspaper's day, the Painesville *Telegraph* operated at top speed when electrical service was resumed.

Page makeup was completed, stereotype mats were molded and 12,500 newspapers (16 pages) were published in 2 hr. and 49 min. All distribution, including mail, was finished in 3 hr. and 15 min.

Team work by all employees together with able supervision of Mechanical Supt. Lorin Bruce and Stereo-Press Foreman George Stevenson made accomplishment of the unusual task possible.

Correction

In the first article of the Rotogravure series currently appearing in *Printing Equipment Engineer* there were two errors in cut captions. In the description of the Harris Sheet-Fed Gravure Printing Press it was stated "Harris web-fed rotogravure presses with cylinders 35 in. to 70 in. circumf., 56 in. wide, 80000 cyl. rev. per min." the latter part of the statement should have read "8000 cyl. rev. per hr."

The other error occurred in the description of the Goss Speedry Press as follows: "Magazine presses in use are arranged to print three colors on one side of the web, and four colors on the other, and are designed to operate at cylinder speed of 20,000 r.p.m." The cylinder speed should have been "20,000 rev. per hr."

Printing Equipment Engineer regrets the errors and hastens to make correction.

Application for GPO Situations Being Received

Applications are being accepted by the U. S. Civil Service Commission, Washington 25, D. C., for Printer (Monotype Keyboard and Slug Machine Operator) positions, in the Government Printing Office, Washington, D. C. The salary for these jobs is $2.12 an hour.

No written test is required. To qualify, applicants must have had 5 years of experience as a monotype keyboard or a lug machine operator, at least 1 year of which was in the type of printing for which application is made. Applicants for monotype keyboard operator must be able to set an average of 4999 ems per hour and for slug machine operator, an average of 4249 ems per hour, after a full and fair trial period.

Interested persons may secure information and application forms from the U. S. Civil Service Commission, Washington 25, D. C., from most first- and second-class post offices, and from Civil Service regional offices. Applications will be accepted until further notice; however, persons who wish to be considered for positions to be filled in the near future should apply at once.

Change of Address

J. W. Valiant, Vice President and Eastern District manager for Harris-Seybold, has announced that Eastern District Headquarters and Service offices have been moved from 75 Varick St. to 380 Second Ave., New York, N. Y.

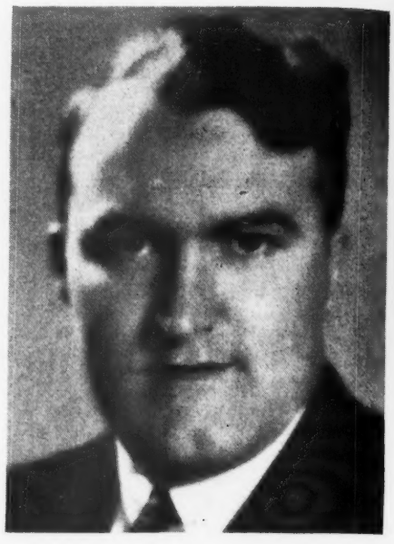
EXECUTIVE ¶s

Frederick J. Amery, until recently Chief Typography Lecturer at Heriot-Watt College, Edinburgh, Scotland, has joined the Carnegie Institute of Technology Printing Department faculty as Assistant Professor of Typography, President Robert E. Doherty announced recently. Mr. Amery, who is a member of the Royal Society of Teachers and a Fellow of the Royal Society of Arts, studied at St. Aloysius College, Highgate; and in the L.C.C. Camberwell School of Arts and Crafts. While attending the Camberwell school he was employed by Vacher and Sons, Ltd. A teacher since 1931, he has been a typography lecturer at the Maidstone School of Art and Crafts, the Tunbridge Wells School of Art and Crafts, the South-East Essex Technical College and at Heriot-Watt Mr. Amery is an expert on visual training aids and is the holder of a first prize silver medal for typography awarded by the City and Guilds of the London Institute. He has also won first prizes for book production and monotype work.

Public Printer John J. Deviny on May 13 announced before a group of Government Printing Office officials that he had appointed Philip L. Cole Deputy Public Printer of the United States. This appointment fills the vacancy which was created when Mr. Deviny, the former Deputy, became Public Printer on May 6. The new Deputy, like Public Printer Deviny, is a career employee, having entered the civil service as an apprentice printer in 1923. Mr. Cole had been Planning Manager in Uncle Sam's big print shop since 1945. Other appointments, to fill vacancies created by the promotion of the new Deputy and the recent death of William J. Cassiday, Director of Purchases, were announced at the meeting as follows: James W. Broderick, Assistant Production Manager, to be Planning Manager; Emmet I. Hill, Director of Commercial Planning, to be Director of Purchases; John A. McLean, Superintendent of Platemaking, to be Assistant Production Manager; William S. McAndrew, Assistant Superintendent of Platemaking, to be Superintendent of Platemaking, and Vincent G. Walkendifer, Foreman of Finishing, Molding and Stereotyping Section, to be Assistant Superintendent of Platemaking.

A. F. Lewis, founder of the *Printing Trades Blue Books* and general manager and treasurer of The Graphic Arts Publishing Co., died of a heart attack in his office in Chicago early in April. He was born in London, in August 17, 1877. A.F., or "Abe" as he was better known throughout the country, had been connected with the Graphic Arts industry for more than 50 years. He founded the *Printing Trades Blue Books* in 1909 and the *Graphic Arts Monthly* in 1929. He was a member of the Chicago Club of Printing House Craftsmen, the Printers Supplymen's Guild of Chicago, Knights of Pythias, Hamlet Lodge No. 539, Fortitude Lodge No. 1003 A.F. and A.M. of Chicago, and O.K.O.J. Consolidated Lodge. Surviving are his wife Rose; two sons Louis I. and Myron F; a daughter Mrs. Elinore Shulman and by brothers Louis A. Lewis of Los Angeles, Meyer F. Lewis of New York, N. Y., Reuben Lewis of Evanston, and sister Miriam Lewis of Los Angeles, and four grandchildren.

Francis M. Britton, well known former New England newspaper mechanical executive, recently purchased the Hudson (Mass.) *News-Enterprise* and is now owner and publisher. For some time he has acted as publishers' representative in the Boston area. Mr. Britton was founder of the New England Newspaper Mechani-



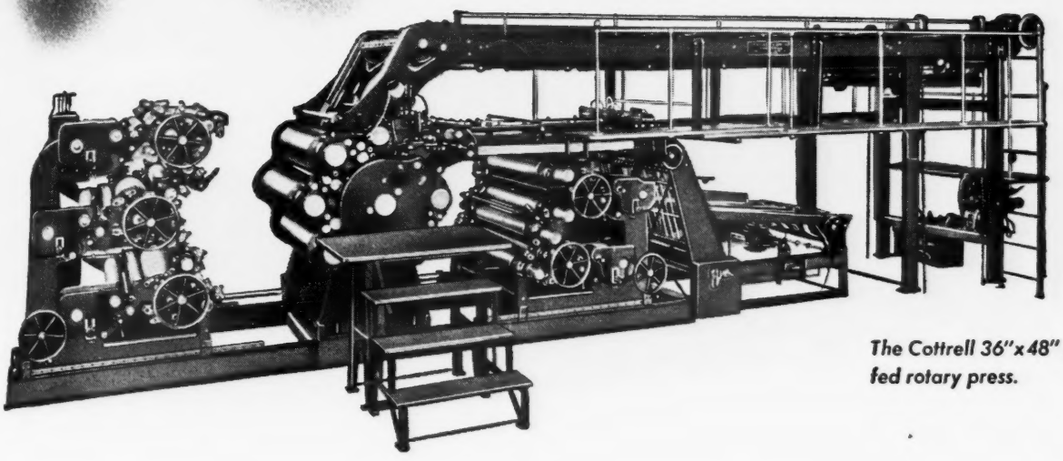
Frank M. Britton

cal Conference and was its first president. For a number of years afterwards he was a director. Formerly, he was production manager of the Nashua (N. H.) *Telegraph*. In 1944 he was named general manager of the Revere (Mass.) Pub. Co. In 1945 he accepted a position as Boston manager of the Boston Suburban Quality Newspapers in Greater Boston.

R. Randolph Karch has been appointed Director of Education of the Graphic Arts Industry, Inc. of Minneapolis, Minn. He will assume his new duties not later than July 1. He resigned his present position as Director of Typography, Advertising Manager, and Manager of Intertype's Printing Dept. Previously Mr. Karch held positions with Rochester Institute of Technology and as principal of the Graphic Arts High School in Cincinnati. During the recent war he served with the rank of Lieut. Commander in the Navy as Officer-in-Charge of Publications in the writing and editing of instruction manals used by the Navy. He also served as a member of the admiral's staff at Pensacola, Fla., as printing advisor to the Naval Air Training Command, later serving as Publications Control Officer for the Fourth Naval District with headquarters in Philadelphia. He is a past president of the Pittsburgh Club of Printing House Craftsmen. He also served for a time as chairman of the research commission of the International Association. He is the author of a number of books and monographs which have been or are presently being published by the University of Pittsburgh, Rochester Institute of Technology, Pitman Pub. Co., Prentice-Hall, Manual Arts Press and the American Technical Society.

Printing House Craftsmen and all Members of the Graphic Arts Industries are welcome here — Recently moved, the offices of the International Association of Printing House Craftsmen, Inc., are located in Suite 808, 18 East Fourth St., Cincinnati 2, Ohio. In center is International Secretary Pearl E. Oldt; amiably approving the new location (at left) is Robert A. Kramer, President of the Cincinnati Club of Printing House Craftsmen; somewhat proudly hovering at right of the door is Lee Augustine, Secretary of the committee which was successful in bringing the International offices to Cincinnati. The new headquarters office, reportedly, is convenient to all leading hotels and downtown railroad and airlines offices.

DEPENDABLE PERFORMANCE



The Cottrell 36"x48" 5-color sheet fed rotary press.

. . . in color printing at speeds

up to 5500 sheets per hour.

Cottrell

C. B. COTTRELL & SONS CO.

Westerly, Rhode Island

New York: 25 E. 26th St. • Clayburn Division: 3713 N. Humboldt Ave., Milwaukee, Wis.
Chicago: Daily News Bldg., 400 W. Madison St. • Smyth-Horne, Ltd., 13 Bedford Row, London W.C. 1, Eng.

Neil MacTavish has been appointed manager of the Philadelphia office of Brandtjen & Kluge. The appointment became effective May 1. Mr. MacTavish started with Brandtjen & Kluge in the fall of 1936 in the Detroit branch office. He was transferred to Akron (O.) territory in 1940. When the war started, he became an inspector for a short time at the naval ordnance plant in Centerline, Mich. He spent about three years in the Army, part of the time as an infantryman and the rest as army photographer attached to the signal corps. He was discharged in August 1945. He returned to the employ of Brandtjen & Kluge and on May 1 was transferred from Detroit to managership of the Philadelphia branch office.

Hunter News Note—A son, Gerald William Hunter, jr. was born to Mr. and Mrs. Gerald Hunter on May 4 at St. Vincent's Hospital, New York. Weight 8½ lbs., height 22½ in. Mr. Hunter is sales manager with Matrix Contrast Corp.

The election of Martin M. Reed as president of Mergenthaler Linotype Co., Brooklyn, N. Y., was announced by the Board of Directors of the company early in June. Mr. Reed, a graduate of Lehigh

Martin M. Reed, new president of Mergenthaler Linotype Co.

University and the University of Pennsylvania Law School, previously served the company as secretary, vice president, and executive vice president, successively. He succeeds William J. Flather jr. of Washington, D. C., who has been elected chairman of the Board of Directors.

The XXIXth annual convention of the International Association of Printing House Craftsmen will be held in Cleveland at Hotel Cleveland, August 8, 9, 10 and 11.

Joseph W. Addison, pressroom superintendent of the Hartford (Conn.) *Times* since 1934 retired on April 1. His retirement on his 75th birthday closed a long newspaper career which took him to 54 cities on the North American continent. He has moved to a year-around home in Tampa, Fla. Joe Addison is as well known, perhaps, as any newspaper mechanical executive in the country. For many years he has been a regular visitor to the ANPA Mechanical Conferences. An inner urge constantly made him seek better ways to print newspapers during his 56-year career. From 1919 to 1927, Mr. Addison was mechanical superintendent of the New York *American* and *Journal*. After that he served three years in the same capacity for Bernard McFadden's newspapers, New York *Graphic*, Philadelphia *Daily News*, Detroit *Mirror* and a paper in Lansing, Mich. He was for a long time a friend of Jack Burke, just recently retired as production manager of Gannett Newspapers. B. F. Garrity (who succeeded Jack Burke as production manager of Gannett Newspapers) jointly with Mechanical Superintendent Joe Woods, announced the appointment of Robert Radcliffe to succeed Addison as pressroom superintendent of the Hartford (Conn.) *Times*. Radcliffe was Addison's assistant.

Entertainment for the Ladies by the Ladies—The Ladies Committee under the chairmanship of Mrs. M. L. (Ruby) Abrams has been busily planning entertainment for the women who will attend the XXIXth Annual Convention of the International Association of Printing House Craftsmen. The convention will be held at the Cleveland Hotel, Cleveland, on August 8, 9, 10 and 11. Identification is as follows: Front row (left to right)—Mrs. Adolph A. Jarol, Mrs. Edward T. Samuel, Secretary; Mrs. J. A. Chinnici, Mrs. George Wise jr., Assistant Chairman; Mrs. M. L. Abrams, Chairman; Mrs. Carl H. Larsen.

Back row (left to right)—Mrs. D. M. Oldfather, Mrs. R. J. Sweeney, Mrs. R. J. Niederhauser, Mrs. F. H. Shuttera, Mrs. H. J. Abrams, Mrs. H. M. Taylor, Mrs. Chester L. Klien, Mrs. C. C. Clippinger, Mrs. Clyde W. King.

THE Ladies Program, complete with moonlight boat rides, fashion shows, sight seeing and shopping tours, and even bingo games, has been announced. Mrs. Abrams states that on the first day of the convention, Sunday, August 8, visiting ladies will register and small groups will be shown around the city in hostesses' automobiles.

On Monday, August 9th, the ladies will be taken on a short, organized tour along Cleveland's lake shore drive, ending up at the world famous Lighting Institute of General Electric's Nela Park. Here the ladies will witness special shows in Nela Park's "Horizon House", newest developments in lighting techniques, and demonstrations of color lighting for all purposes. Monday evening there will be a huge bingo party.

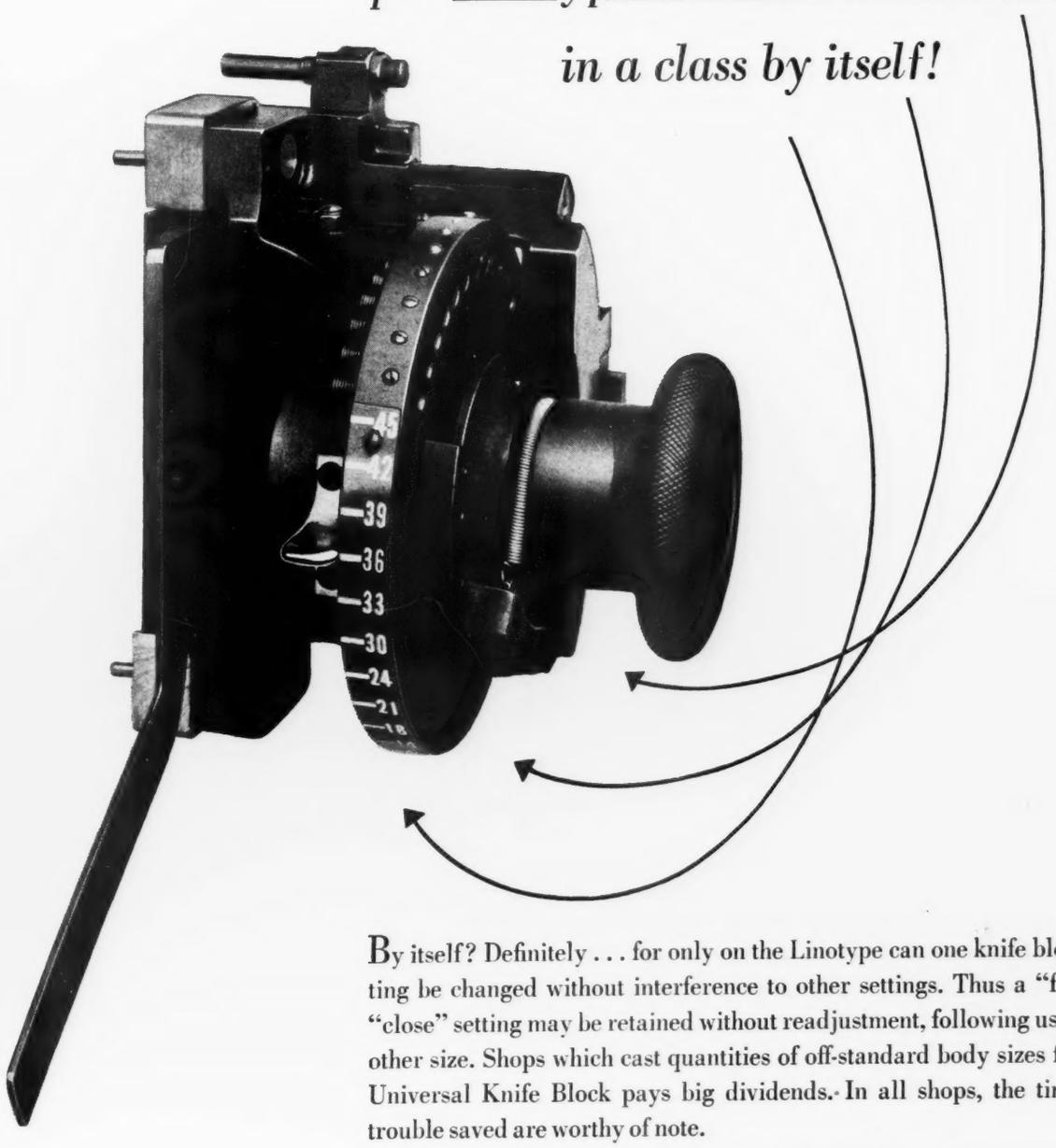
Tuesday's program for the ladies will be highlighted by a luncheon and style show in Higbee Company's famous Silver Grille. The evening is scheduled to be spent with all the conventioneers on Lake Erie, dancing and enjoying a moonlight ride on the decks of the steamer "Cadillac".

The final day, Wednesday, August 11th, has been set aside for the ladies to shop and prepare for the convention banquet and dance that evening, Mrs. Abrams said.

20 SETTINGS, *each independently adjustable,*

put Linotype's Universal Knife Block

in a class by itself!



By itself? Definitely . . . for only on the Linotype can one knife block setting be changed without interference to other settings. Thus a "full" or "close" setting may be retained without readjustment, following use of another size. Shops which cast quantities of off-standard body sizes find the Universal Knife Block pays big dividends. In all shops, the time and trouble saved are worthy of note.

To make a change of trim, the operator simply turns the conveniently located knob to any of 20 settings. That's all there is to it. Three-bearing construction gives rigid support to the right-hand knife, assuring parallel trim throughout the range of the block.

The flexibility of the Universal Knife Block is typical of Linotype flexibility. It increases efficiency and meets special needs with minimum adjustment. It's standard equipment on all Blue Streak Linotypes.

LINOTYPE

Set in Linotype Bodoni Family

MERGENTHALER LINOTYPE COMPANY, 29 RYERSON ST., BROOKLYN 5, N. Y.

C. A. Harwood has been appointed Pacific District Manager for Electric Boat Co., Printing Machinery Div.

Stuart E. Arnett, Sales Manager of the Printing Machinery Div. of the Electric Boat Co., announces appointment of W. Donald Heide as sales representative.

W. Donald Heide has been appointed sales representative of Printing Machinery Div., Electric Boat Co.

Heide's father was associated with William Rudge in the Printing House of William Edwin Rudge. He gained experience in all departments of the Graphic Arts, including offset and letterpress production, when he worked in the Rudge plant from 1931 to 1937. He left Rudge to become Eastern sales manager of the Corday & Gross Company of Cleveland. Prior to coming with the Electric Boat Co., Mr. Heide was a sales representative for the Harris Seybold Co. He is a graduate of Cornell University. Mr. Arnett also announced appointment of C. A. Harwood as Pacific District Manager. A district office will be opened in San Francisco. Mr. Harwood was formerly associated with the Harris-Seybold Co. He served with the United States Army during the war. Harwood is a member of the San Francisco Club of Printing House Craftsmen, Big Ten Club in Los Angeles, and is also active in the Hollywood Advertising Club. He graduated from Ohio State University and Ohio Northern Law School.

The appointment of Marshall Worcester as a lithographic technical representative of H. D. Roosen Co., Inc.; New York printing ink, dry color and varnish manufacturers, was announced recently. At the same time, announcement was made of a program for expanding facilities at the company's Chicago plant. The expansion program is designed to supplement the over-all increase in the Roosen Company's facilities which was inaugurated three years ago. Mr. Worcester started with the Regensteiner Corporation, offset lithographic house in Chicago, at the age of 21 as an apprentice pressman. Shortly he became assistant to Charles Rahn, Regensteiner pressroom superintendent. He remained in this capacity until Jan. 16 of this year. In addition to acting in an advisory capacity on lithographic problems, Mr. Worcester will devote a considerable part of his time to lithographic ink sales promotion. H. D. Roosen Co., Inc., which was incorporated in 1898, became a part of Columbian Carbon Company in 1945. The founder H. D. Roosen, died in June, 1932, and shortly thereafter Robert Roosen was elected president of the company.

Darwyn C. Jackson, according to Vice President W. W. Brown of Western Newspaper Union and Associated Companies, has been appointed manager of WNU's Printing Machinery Div. Jackson is a former weekly newspaper owner and publisher. He attended the University of Nebraska. He joined WNU in 1936

Darwyn C. Jackson appointed Manager, Printing Machinery Div. Western Newspaper Union.

and was assigned to the Kansas City branch. A short time later he became associated with the Cincinnati branch. In 1938 he became resident manager of the Omaha branch. In December 1942 he enlisted in the Army Air Force and for 39 months as an administrative Inspector. Jackson returned to WNU in 1946 at Omaha. He will continue to make his headquarters at the Omaha general office of WNU.

Rutherford Machinery Div., Sun Chemical Corp., announces the promotion of Michael Annick to General Sales Manager. He has been associated with Rutherford since 1938, having served as Chief Engineer at the East Rutherford plant, and for the last four years as Sales Engineer in the New York office. Previous to joining Rutherford, he was Chief Engineer in another plant, specializing in Graphic Arts Equipment. He has also been a free lance engineer, including experience with aircraft engine design. He is a member of the New York Litho Club and the Society of Automotive Engineers.

Michael Annick has been appointed General Sales Manager, Rutherford Machinery Div. of Sun Chemical Corp.

Harry Hale Participates **—Each year, certain citizens of Newport, Ore., stage a crab festival. In April, they brought a box of crabs to the news room of the Portland (Ore.) *Oregonian*. Dispensing the crabs is Editorial Writer Ben Hur Lampman (without coat), a nationally known writer. Production Manager Harry Hale of the *Oregonian*, is the chap in the rear holding up a crab. The other two men are citizens of Newport.**

(Editor's Note—This item was sent in to *Printing Equipment Engineer* before the recent floods which destroyed the city of Newport.)

...the improved MIEHLE Vertical

the BASIC PRESS FOR EVERY PRINTER

The Miehle Vertical is the *best* answer to every printer's basic every-day needs . . . proved by *thousands* of printers, over many years of comparison with other presses.

The improved Model V-50 Vertical will handle 94% of the "run of the hook" jobs—from post card size to 14" x 20" sheets — returning profit even on short runs. Easy accessibility cuts wash-up and change-over time to a minimum. New refinements in inking and register, automatic lubrication and additional safety devices assure less down time.

All in all, the improved Miehle Vertical is the basic press for every printer . . . the foundation for a profitable and stable business . . . today *and* tomorrow.

(ABOVE): Scene from the new Miehle sound movie, "Look to the Years Ahead", which discusses the importance of long range planning of equipment purchases and demonstrates the Miehle Vertical and "29" Letterpresses. Available for showings to Graphic Arts trade groups.

MIEHLE PRINTING PRESS & MFG. CO.
2011 Hastings Street (14th and Damen)
Chicago 8, Illinois

THE MIEHLE
MODEL V-50
VERTICAL
product of years of development

William Guy Martin, Vice President and Pacific District Manager of Harris-Seybold Co., has announced that Ormel F. Duke has joined the firm as sales representative in Los Angeles and Southern California. Duke has been active in the Graphic Arts industry for the past 15 years, having had experience as a pressman, instructor, serviceman, cameraman, and platemaker. Prior to joining Harris-Seybold, he was supervisor of the Los Angeles commercial printing plant of Moore Business Forms, Inc. During the war years Duke was with North American Aviation in Los Angeles, serving as manager of that firm's printing plant, and directing all photography and production of Army Air Forces technical manuals concerned with North American aircraft. He also owned and operated his own litho plant, the Commercial Offset Printers in Los Angeles, prior to the war. Martin stated that Duke will represent Harris-Seybold in the territory bounded by Monterey, San Diego, El Paso, Albuquerque, and Las Vegas.

Charles A. Harless, Chief Engineer of R. Hoe & Co., Inc.'s press division, has been elected a vice president. He joined Hoe in 1945.

Wendell Scott Gullion has joined the art department of Ketchum, MacLeod and Grove, Inc., Pittsburgh advertising agency, as director of typography. He formerly was manager of university printing for the University of Pittsburgh after 10 years as director of design for Eddy Press Corporation, Pittsburgh.

Howard E. Eddy, vice president and sales manager of Chemco Photoproducts Co. has retired to his Maryland farm's rolling acres. He had 20 years of service with the company. Sam B. Anson jr., well known to the trade in the Chicago area has been moved up from the managership of the Chicago office to the position of general sales manager and is now located in Chemco's office in the New York *Herald Tribune* building. Mr. Anson is a practical photo-engraver. Under Mr. Eddy's guidance, Chemco established offices in New York, Chicago, New Orleans, Atlanta, Boston and Dallas. He also appointed the California Ink Co. as Chemco's west coast agency, with Douthitt Corporation serving Detroit and W. E. Booth covering Canada.

Sun Chemical Corp. recently honored William Recht at a dinner commemorating the 35th anniversary of his association with the organization. The affair was held at the Hotel Pennsylvania in April. John F. Devine, Assistant to the President of Sun, presided at the dinner and paid tribute to Recht. Mr. Recht began his business career with Fuchs & Lang. When this firm became a part of General Printing Ink, he was appointed export manager for the corporation, and until recently served as general manager of its Rutherford Machinery Div. Mr. Recht is now vice president of Sun and chairman of its Graphic Arts Group as well as general manager of the Overseas Division. He was presented with a leather suitcase.

Harold H. Heinrich, President of H. H. Heinrich, Inc., left Saturday, May 16, on the Flagship London of the American Overseas Air Lines, for an extended business trip through Germany, Switzerland, France, Belgium, Holland and Great Britain. He returns via the steamer New Amsterdam leaving Rotterdam, Holland on June 22.

William J. Egan, General Manager of the General Printing Ink Co., Pacific Coast Div., Sun Chemical Corp., has announced the appointment of Walter W. Lawrence as Assistant Manager of the Los Angeles Branch. Mr. Lawrence

Walter W. Lawrence, Assistant Manager, Los Angeles Branch, Pacific Coast Div., General Printing Ink Co.

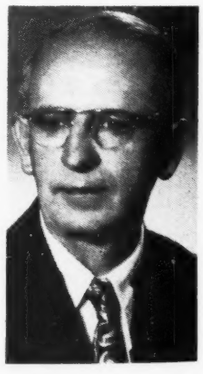
started with the Company in 1933, and prior to the establishment of the Pacific Coast Div., was Los Angeles Branch Manager for Fuchs & Lang Div. Mr. Lawrence will work under the immediate direction of Andrew E. Cottril, manager of the Los Angeles District.

Murray Stempel, Vice President and General Manager, Paisley Products, Inc., announces appointment of Sam Schuller as Technical Director of the firm's combined operations. Prior to his promotion, Mr. Schuller served as chief chemist of the Paisley Chicago Laboratories, where he originated a number of new adhesive products. Mr. Schuller was born in Indiana, received his education in Ohio, graduating from the University of Toledo

Sam Schuller is now Technical Director of Paisley Products' combined operations.

with a B.S. degree in Chemistry. He joined Paisley Products in 1937. His appointment now gives him direction over all Eastern Laboratories, which will be fully staffed and integrated with the Chicago Research and Development Department. Mr. Schuller resides in Chicago and is a member of the Chicago Section of the American Chemical Society and TAPPI.

C. R. Crow, 68, Treasurer and member of the board of Miller Printing Machinery Co. of Pittsburgh, died of a heart attack at his home in Crafton, Pa., on April 7. Mr. Crow had been with the Miller Company for 31 years, first as



C. R. Crow, Treasurer, Miller Printing Machinery Co., passed away early in April.

Auditor, then Assistant Secretary and Treasurer, and in 1946 was elected Treasurer. He graduated from the University of Pittsburgh in 1905 and was a member of the Sigma Chi Fraternity.

Forms D. M. Service

Marvin L. Chase, formerly of the sales staff of James Gray Inc., New York, N. Y. has resigned to form the Chase Direct Mail Service Corp. Offices and plant are located at 246 East 44th St., New York, N. Y. The firm will do lithography, letterpress printing, and direct mail service.

SCOTT

"The Modern Newspaper Press"

• The Scott Extra-High-Speed Printing Unit employs the most modern gearing—special automotive type alloy gear steel, heat treated, hardened and lapped—the most powerful and quietest gearing on any press.

• The Printing Cylinders of solid forged steel, relatively short and with 6½ inch diameter roller bearing shafts of special design produce the most rigid and uniform impression.

• The Scott Ink Distribution inks the pages so uniformly, regardless of speed, that it is difficult to pick out slow motion copies from top speed production. The most nearly uniform inking of any newspaper press.

• The Scott 3 and 2 Ratio Folder handles all types and sizes of products better. The inside sections of collected products are cut a trifle shorter than the outside sections greatly improving the appearance of heavy papers. Elimination of transfer from one set of pins to another improves appearance and avoids dangerous folder chokes. The patented Expansion Bands and patented Safety Gate make it the safest of all Newspaper Folders.

Send for New Catalog on
this Modern Press

WALTER SCOTT & CO., INC.

PLAINFIELD, N. J.

Fred Wilson, Stereotype Foreman, San Francisco *News;* George Fuller, Stereotype Supt., Cleveland *Press;* J. W. Fitzsimmons, Stereotype Foreman, San Francisco *Call Bulletin.*

Pacific Conference

(Continued from Page 20)

Competition Hammered Home

This fact was hammered home to those present by the next speaker, Howard N. King, of Intertype Corporation. Mr. King paid his respects to the lack of progress in the improvement of the physical appearance of newspapers and made many suggestions for the improved appearance of newspapers. He referred briefly to the use of typewriter-like machines for composition in lieu of hot-metal composed type. In part he said:

"Whenever this industry of ours faces trouble, whether it be labor or a lack of sales, we find substitutes of one kind or another creeping into it. True, we have had some trouble these past several months and with it came the substitutes, which was only natural. What have these machines contributed toward the betterment of our newspapers? Have they reduced the cost of operation? Have they helped to produce a better looking newspaper? I am afraid not. I am afraid these glorified typewriters are nothing more than substitutes, which were given the ball to carry during a difficult period—and they carried it well.

"Excellence in typographical treatment is never anything that can be left to chance. A constant effort, both of education and enforcement, must be made, if your newspaper is to achieve the 'new look'. And believe me, newspapers need this 'new look' more than the girls of this country do.

"The operational costs of newspapers have risen to an alarming point. As a matter of fact, there is much fear on the part of many publishers that these costs may continue to rise to a point where they will exceed the revenue gains.

"Therefore, it must be the aim of every department head to streamline each step of production. We must become engineering minded in this industry, or we shall continue to see a falling off of newspapers across the country. As I was preparing to leave on this trip, one of our large and very old newspapers in Pennsylvania, threw in the towel, because of rising costs.

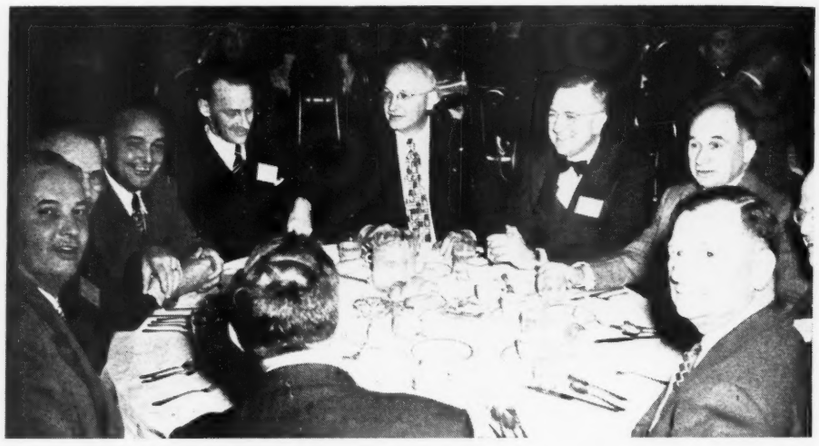
"I know of one mechanical executive who spent four hours one day writing down every motion, and every step taken by one of his compositors. A time and motion study, not to enforce the worker to do more, but to actually see if his job couldn't be made easier and likewise more profitable to his employer.

"Time, much time, can be saved in all departments if we give intelligent thought to planning. We must avoid all manual effort where it can be done mechanically. For example, if you reduce the amount of overset each day by dummying the paper, then we should do it, if hours can be saved. In addition most of us realize by dummying a page, we achieve a much better appearance.

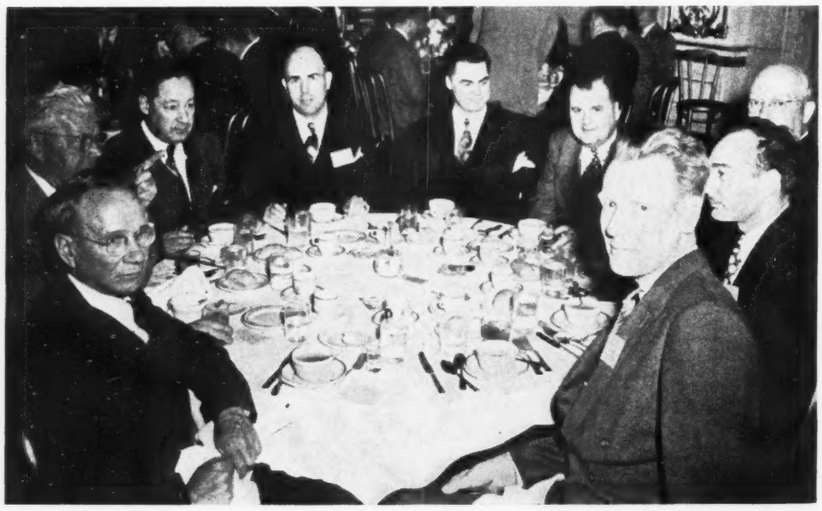
"Don't get the feeling that most of your advertising accounts should or will use color. As a matter of fact, I feel that color should not be used in advertisements unless they occupy a half page or more. Color is an added attraction—to create a 'stop' as the reader goes through the paper—it is the interrupting idea designed to create and to display merchandise in their actual colors and make them more attractive to readers.

"Newspapers will tend in the direction of daily news magazines, there's no denying that now. Extensive use of color, fine printing, careful make-up, better

(Continued on Page 58)



Clockwise around the picture from extreme left: Rene Leach, Mergenthaler Linotype Co.; Harold Pond, Harry W. Brintnall Co.; Judson Bradley, Sherman Institute, Riverside, Calif.; Ted Cannon, *Deseret News,* Salt Lake City, Utah; Paul Gallagher, State Printer, Sacramento, Calif.; E. O. Strong, State Printing Div., Sacramento, Calif.; Arthur Bagwell, Sacramento (Calif.) *News-Bee;* Howard Thomas, Sacramento (Calif.) *Union;* Milton Durand, Intertype Corporation, San Francisco; Ralph Titus, Asst. State Printer, Sacramento, Calif.



Left to right, clockwise: Art Randall, Los Angeles *Times;* William Brandes, California Ink Co.; G. R. Hutchinson, Los Angeles *Times;* H. A. Williams, Cline Electric Mfg. Co.; Glenn C. Lee, Tri-City *Herald,* Pasco, Wash.; Harry Eybers, Salt Lake City *Tribune;* R. H. Westling, Howard Flint Ink Co.; Walter Anderson and Lester Cawelder, both of San Luis Obispo (Calif.) *Telegram-Tribune.*

Patents For The GRAPHIC ARTS FIELD

Covering patents issued April 13, April 20, April 27, and May 4.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issuing each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating

During the four weeks covered by this report, no patents have been issued for this heading.

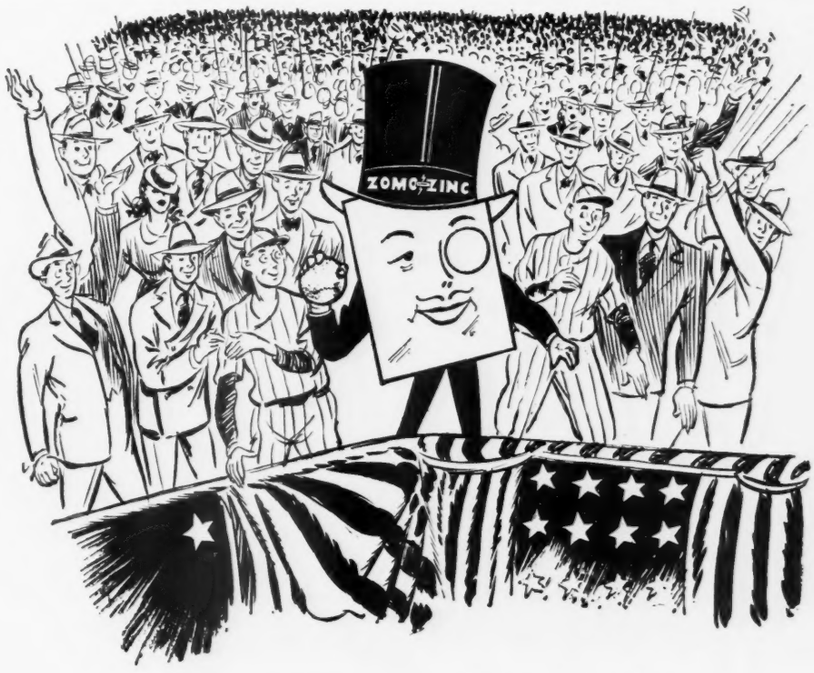
Composing Room Equipment

2,439,911. SPACEBAND CLEANING MACHINE is in the form of an attachment which is adapted to rub two or more space bands at regular intervals against a plane surface coated with graphite to automatically and periodically clean the space bands of Linotype machinery of metal accumulations at the casting points. The machine has a carriage with two laterally-spaced upstanding posts which engage with the shoulders of a standard space band. An upstanding finger which is longitudinally spaced from the same. The fingers are adjustable toward and away from each other and are respectively engageable in notches at opposite ends of the space bands. A presser with one plane surface coated with graphite is arranged to cooperate with the carriage in reciprocating the space band on the carriage to rub the space band against the graphite surface. Invented by Samuel Sofnas, Indianapolis, Ind. Unassigned. Application April 2, 1945. 11 claims.

Feeding, Folding, and Delivery

2,439,420. A SHEET REGISTERING MECHANISM for printing machines is disclosed in patent 1,780,348, granted Nov. 4, 1930, to Eckhard. The mechanism incorporates side guides which are arranged to position sheets for side register and to then recede. This device is satisfactory for handling metal sheets of normal gauge. The mechanism of present patent is particularly adapted for "side-guiding" sheets of thin metal or cardboard. In the improved mechanism arcuate peripheral surfaces of two inclined guide rollers engage the upper surface of each sheet as it travels toward printing cylinders and lightly presses the edge portions thereof against the sheet supports to thus restrain the margins of the sheet that engage side guide flanges of the two guide rollers. The flanges of the guide rollers position the sheet in predetermined lateral relation to the cylinders to insure accurate side register. Inasmuch as one of the guide rollers is not yieldably mounted the side register will be determined by the position of the flange of the non-yieldable guide roller. The other guide roller and the sheet-supporting platform are mounted for yielding swinging movement away from the non-yieldable roller. By this arrangement the yieldable roller and platform yield to accommodate a metal sheet of minimum thickness and a sheet of relatively soft material such as cardboard. The guide rollers rotate in the direction of movement of the sheets. To enable printing on both sides of a sheet the side guides are interchangeable. Invented by William K. Eckhard, Newark, N. J. and Edwin W. Goodwin, New Rochelle, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application Nov. 17, 1942. 10 claims.

2,439,722. DRYING APPARATUS is for drying web material such as cloth or paper. Web is carried through an elongated drying space having a zigzag arrangement. While traveling the web is in a slack, non-tension condition which prevails throughout the entire length of the drying spaces even though shrinkage should occur. The communicating chambers are arranged and located one above another. There are a



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plurality of web-supporting rolls in each drying space section and a direction roll at the junction of each two connecting drying space sections around which the web passes and which feeds the web from section to section. The supporting rolls are rotated positively to feed the web forward and the direction rolls are non-positively driven. Speed automatically adjusts itself to the speed of the web being delivered. The nozzles which deliver jets of air downwardly against the web are located directly over the supporting roll. Upwardly directed nozzles are situated between the supporting rolls. Each of these nozzles is located between two adjacent rolls and the jet of air from each nozzle impinges against the underside of the web at a point between the supporting rolls. The material is lifted somewhat by the action of the jets of air. Invented by William Dreisel, Lawrence, Mass. Assigned to Andrews & Goodrich, Inc., Dorchester, Mass. Application Feb. 21, 1947. 2 claims.

2,440,839. **ROTARY DRUM DRYING APPARATUS** is for drying sheet material continuously fed in web form. It is described in apparatus for preheating the adhesive face of a liner as it is delivered to a board making machine. Apparatus comprises a drum having a large diameter cylindrical heating surface for accepting in surface contact therewith a length of material from a supply roll. A pair of concentric internal and external gears are arranged at opposite ends of the drum. Internal gears are driven oppositely with respect to external gears. A pair of idler rolls are disposed externally of drum and parallel to drum axis. Idler rolls are operatively supported by internal and external gears for arcuate movement about drum axis relatively to the drum. Invented by Charles W. Apgar and Abraham L. Rosenfeld, Philadelphia, Pa. Assigned to Charles W. Apgar, Abraham L. Rosenfeld, and Frederic R. Mann, trustees, all of Philadelphia, Pa. Application Sept. 10, 1945. 4 claims.

Plate Making

2,440,102. **PROCESS FOR THE MANUFACTURE OF A TWO TONE IMAGE.** A method is disclosed of forming a desired halftone image, such as a design, picture, print, etc., having a predetermined polarizing portion and non-polarizing portion, in a sheet of transparent plastic having oriented, long chain molecules. Method comprises printing a surface of the sheet with a halftone plate on which the image has been reproduced and which is linked with a resist material to cover the portions of the sheet which are to provide the non-polarizing portions of the image. The image forming portions of the sheet adjacent those portions covered by the resist are then dyed with a dichroic dye to provide image forming portions of a similar tone. The plastic may be regenerated cellulose, etc. A sheet of polyvinyl alcohol is the preferred type. It is a process for forming in the material a design most clearly visible in polarized light. Invented by Edwin H. Land, Cambridge, Mass. Assigned to Polaroid Corp., Cambridge, Mass. Application May 31, 1944. 4 claims.

Printing Inks and Related Chemicals

2,439,378. **PRINTING INK** is useful in the printing of newspapers and similar porous stocks. The ink is said to show markedly reduced strike-through, smudge and rub-resistance and to have the desired property of drying so slowly on a press that the press can be turned over after almost a week's idleness without cleaning up. The inks consist of pigments, such as carbon black, lithol red, dispersed in vehicles containing essentially from 20% to 40% of Utah coal resin, from 1 to 2 times as much news ink oil, and sufficient additional solvent of the kerosene type —from 20% to 50% of the vehicle—to reduce the viscosity to that required for newsprinting. It is essential that the ratio of ink oil to Utah coal resin should not be in excess of 2 to 1. The Utah coal resin appears to be unique in its effect on petroleum oils in producing smudge-resistance. A resin disclosed in patent 2,439,380, of this report, has somewhat similar properties. Invented by Otto P. Berberich, Jersey City, N. J. Assigned to Interchemical Corp., New York, N. Y. Application April 10, 1945. 4 claims.

2,439,380. **PRINTING INKS** consist of pigments dispersed in vehicles containing essentially from 20% to 40% of limed rosin, containing 6% to 8% of calcium, calculated as $Ca(OH)_2$, from 1 to 2 times as much news ink oil, and solvent of the kerosene type—from 20% to 50% of the vehicle—to reduce the viscosity to that required for newsprinting. Carbon black may be used for black inks and sodium lithol red for comic ink. Invented by Everett F. Carman, Montclair, and Otto P. Berberich, Jersey City, N. J. Assigned to Interchemical Corp., New York, N. Y. Application April 10, 1945. 4 claims.

2,439,442. **PROCESS OF MAKING PASTE OF HYDROPHILIC CARBON BLACK** comprises combining granular carbon black with sodium hypochlorite in proportions of about 100 gms. carbon black, 300 cc. water and 300 cc. of 10% NaOCl until exothermic reaction takes place. A sludge of 8-9 pH is thereby formed. Sludge is acidified to bring pH to about 2, filtered and washed until black begins to disperse in the wash water. It is partially dried at a temperature not over 100° C. Gastex carbon black P-33 and other hydrophobic blacks can thus be converted to a hydrophilic product. The product forms a satisfactory ink when mixed with water. Product is also usable in lacquers. Invented by Fred H. Amon, Weston, and Fred S. Thornhill, Hyde Park, Mass. Assigned to Godfrey L. Cabot, Inc., Boston, Mass. Application Feb. 6, 1943. 2 claims.

2,439,626. **ANTHRAQUINONE VAT DYESTUFFS.** One of the dyestuffs embodying the invention is 1-(4'-phenylsulfone-benzoylamino)-4-benzoyl-aminoanthraquinone which is obtainable in very good yield in the form of red crystals which melt at 363° - 365° C. The crystals dissolve in concentrated sulfuric acid to a red solution. It dyes cotton very fast to brilliant red tints from a black-violet vat. The products can be used for dyeing and printing a great variety of animal and vegetable fibers, including cotton, linen, artificial silk and staple fiber from regenerated cellulose and superpolyamides. In the form of their leuco-salts of sulfuric acid, obtainable in the usual manner, they can be used for dyeing and print-

TO SPEND $150,000 ON RESEARCH

DURING the next three years, $150,000 will be spent on the most expansive organized attack the electrotyping industry has ever made on the solution of mutual technological problems. Meeting in Chicago recently, the Board of Trustees of Printing Plates Research, Inc., research organization of electrotype manufacturers, authorized the expenditure of $50,000 annually on a program of laboratory and plant research. The new program began on April 1 of this year and will extend to April 1, 1951.

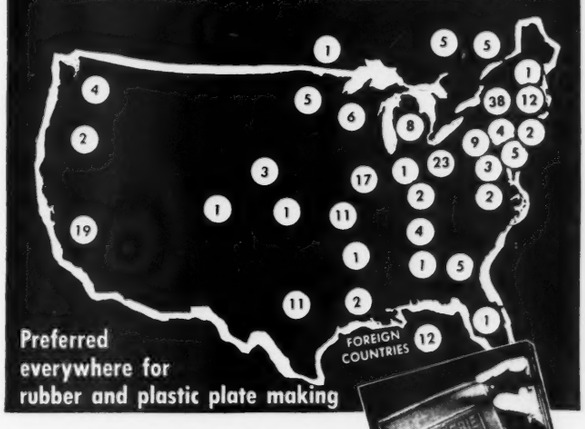
To conduct the research, the Board renamed Battelle Institute as its laboratory headquarters. This Columbus (O.) research foundation, which possesses extensive facilities for graphic arts research, has been the site of PPR's research activities since the organization's incorporation in 1941.

Under the new program, emphasis will be given to improvements in duplicate printing plates and manufacturing methods. A new feature of the program will be close liaison between Battelle engineers and member electrotype plants.

Printing Plates Research, Inc., is a nonprofit organization of 19 electrotype manufacturing firms of the United States and Canada. Its research at Battelle Institute has resulted in several important developments in printing plate manufacture, the best known being the plastic electrotype molding process, known commercially as the PPR molding process.

By action taken earlier this year by the members at their annual meeting, the benefits derived from the group's research can now be extended to firms not affiliated with PPR as full members. Under an amended code of regulations, an associate membership was established which permits firms so affiliated to the non-exclusive use of any PPR invention without additional charge. Associates share in current research expenses, but are not assessed for research costs prior to April 1, 1948.

ACRAPLATE



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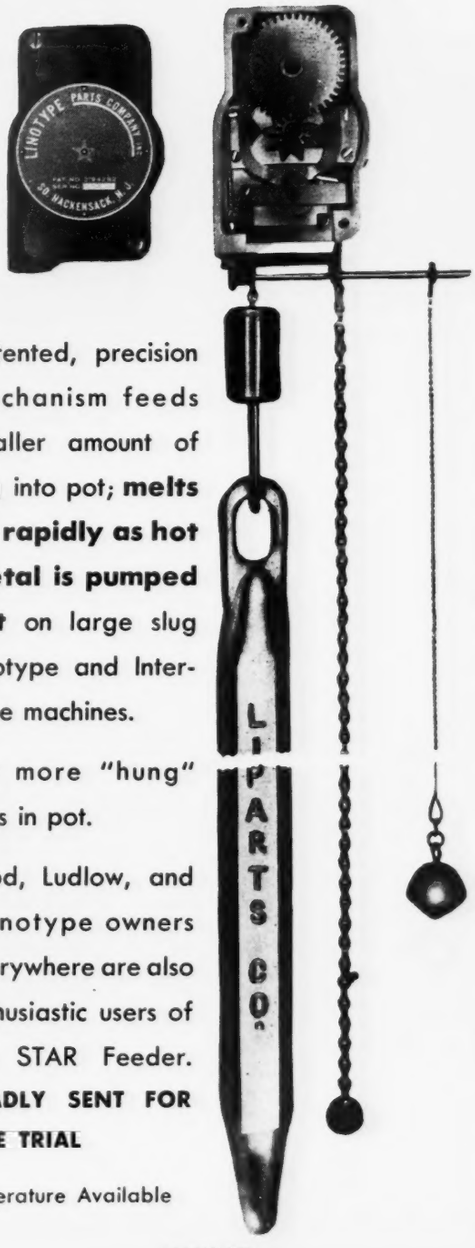

Patented, precision mechanism feeds smaller amount of pig into pot; **melts as rapidly as hot metal is pumped out** on large slug Linotype and Intertype machines.

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ing by the usual methods employed for this class of dyestuffs. Invented by Walter Kern, Sissach, Switzerland. Assigned to Society of Chemical Industry in Basle, Basel, Switzerland. Application October 2, 1944, in Switzerland Nov. 1, 1943. 4 claims.

2,439,745. A PRINTING PASTE for nylon fabric is disclosed. It comprises a thickening agent made into paste with water, a color selected from the group consisting of direct and acid dyestuffs, a caprolactam, and an ammonium salt selected from the group consisting of the neutral and acid ammonium salts of sulfuric, phosphoric and pyrophosphoric acids. The proportion of color is from 0.5% to 3% and the caprolactam from 2% to 7%, both by weights based on the total weight of the paste. Invented by Charles Franklin Miller, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application Feb. 23, 1946. 8 claims.

2,440,349. ALKYLOLAMIDE OF A TRIHYDROXYSTEARIC ACID is useful as a pigment wetter in the preparation of printing inks, i.e., a pigment such as carbon black. The process of preparation comprises reacting trihydroxystearic acid with an alkylol amine in the presence of an aromatic hydrocarbon having a boiling point of 80° to 176° C. at the temperature of reflux, with continuous removal of water formed until a sufficient quantity of water has separated to indicate essential completion of the reaction. The hydroxy fatty acids suitable for use in the process include oleic acid and acid obtained from hydrogenated castor oil. Invented by Benjamin B. Schaeffer, Upper Darby, Pa. Assigned to United States of America as represented by the Secretary of Agriculture. Application Nov. 14, 1944. 4 claims.

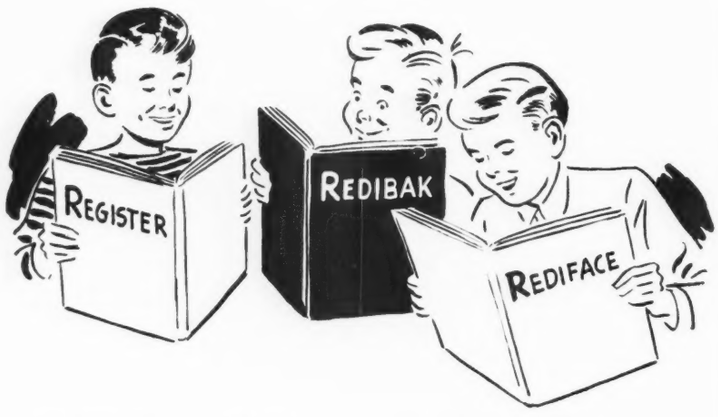
2,440,526. FIBROUS SHEET MATERIAL FOR THE ELECTROLYTIC FORMATION OF AN AZO DYESTUFF. In the preferred adaptation, patent includes the production of dyes in connection with the art of facsimile recording. This patent is a continuation-in-part of application Serial No. 178,743, now patent 2,306,471. Invention provides solutions or, where feasible, mixtures, of appropriate reagents comprising a diazotizable amine and an ionizable nitrite which are adapted for electrolytic reaction to produce a diazonium compound by reaction with a coupling reagent present in the solution. Monoamino benzene compounds, polyamino benzene compounds, etc. may be used. Sodium nitrite and potassium nitrite are suitable for use and resorcinol, 4-chlororesorcinol, alpha naphthol, etc. may be used as coupling compounds. On line 55, column 25, of this patent, it is stated that the use of compositions within the scope of the invention enables the production of dyes and pigments by subjecting solutions or mixtures of chemicals to electric current. Such dyes or pigments may be obtained in the form of a paste, powder, or as a liquid solution, and subsequently adapted for use as coloring paints, inks, etc., or for dyeing various materials. It is within the scope of the invention to produce such dyes or pigments by intermittent or continuous reaction. Materials such as clothing, piece goods, and paper fall within the purview of the invention. Materials may be treated by immersion in solution and electric current used to fix the dye in or on the material. Dye applications may be in the form of a surface coating or a dyeing within the fibrous structure. Invented by Myer Solomon, deceased, late of Westmont, N. J., by Nellie W. Solomon, administratix, Princeton, N. J. Assigned to Radio Corporation of America, New York, N. Y. Application Dec. 23, 1942. 8 Claims.

2,441,063. SALTS OF ALKYLOLAMINE BORIC ESTERS, alone, or in conjunction with other substances, are useful in pigment dispersions such as printing pastes. The products are also utilizable in compositions adapted for use as detergents, wetting agents, etc. Patent claims a salt of an alkylolamine boric ester and a sulphonated aliphatic carboxylic acid having from 8 to 22 carbon atoms, in which an alkylol group of the alkylolamine forms a bond through oxygen between the alkylene portion of the alkylol group and a boron atom, and in which a salt has been formed between an amino-nitrogen group and the carboxylic acid nucleus. Products may be employed in various compositions which include fatty acids or soya bean oil, cottonseed oil and the like, and the soaps thereof, such as olive oil soap. Invented by Henry H. Gilmann, Philadelphia, Pa. Assigned to Quaker Chemical Products Corp., Conshohocken, Pa. Application June 4, 1943. 13 claims.

Printing Presses and Equipment

2,439,454. ROTARY PRINTING PRESS. The plate and impression cylinder of

(Continued on Page 52)



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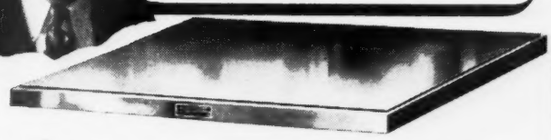

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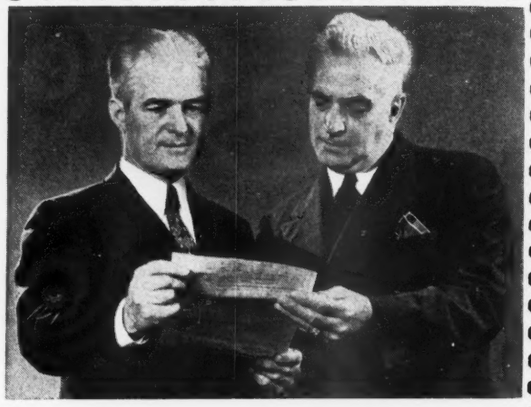

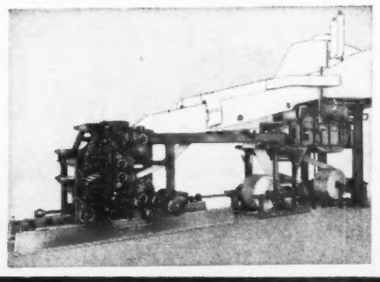

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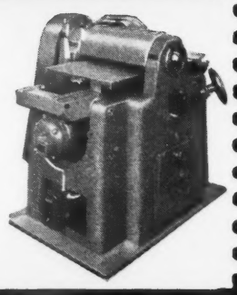


HESS & BARKER

PRINTING PRESS & EQUIPMENT MANUFACTURERS

SINCE H-B 1891

212-22 S. DARIEN ST.
PHILADELPHIA 7, PA.
TELEPHONE PE 5-4070

(*Continued from Page 50*)

this high speed rotary printing press are geared together to rotate at the same speed. The ink for the plates on the plate cylinder is supplied by means of ink drums transferring ink to rollers which contact with the plates on the plate cylinder. The cylinders of the printing couple are driven from a compound bevel spur gear receiving its power from a main driving shaft while the heavy ink drums are driven independently and separately. The drive from the main shaft to the cylinders of the printing couple includes a resilient gear in which the teeth are so mounted as to have considerable flexibility or resiliency with respect to the hub of the gear, so that while the printing couple rotates at an average speed which is constant, it is permitted to have slight, rapid changes in speed to accommodate for the small accelerations and decelerations which occur in the normal running of the cylinders of the printing couple. The variation in the speed of running of the printing couple does not affect the drive of the ink drums. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to Goss Printing Co., Chicago, Ill. Application Nov. 28, 1944. 2 claims.

2,440,084. LITHOGRAPHIC SPRAY DEVICE includes a guide supported on a lithographic airbrush parallel to the axis of the spray produced by the airbrush. An apertured shield is longitudinally adjustable on the guide with the aperture aligned with the spray. A spring pressed extension on the guide is adapted to engage a lithograph surface to position the orifice with respect to the surface. Liquid from the spray which does not pass through the aperture is trapped in the shield and conducted to the airbrush reservoir through a tube. Invented by Lawrence B. Goda, Sr., Chicago, Ill. Unassigned. Application Feb. 4, 1944. 5 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D.C.

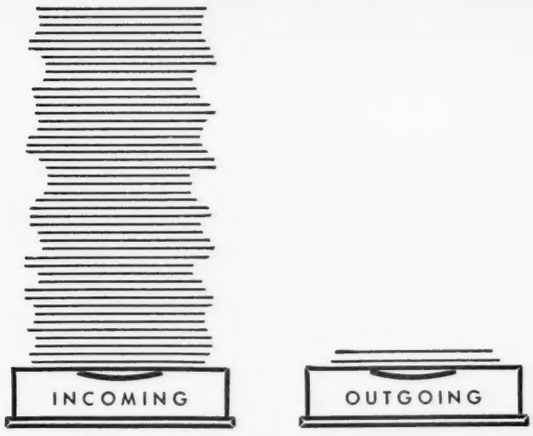
2,440,848. FORMING MACHINE is for high speed operation and is applicable to practically all operations which may be performed on work passed through the machine, e.g., stamping, molding, printing, etc. It might be adapted to heavy die stamping and embossing work, probably on heavy stock. Feeding and guiding apparatus form no part of the invention. Machine comprises a plurality of rotating shafts, a working head cooperating with and operated by first eccentric means, which term includes eccentric sleeves, or what are generally known as "eccentrics," cranks, etc. There are second eccentrics" on each of the shafts and a counterweight cooperating with and operated by the second "eccentrics" for restraining the counterweights against rotating. The counterweight may be restrained against rotating by a part pivoted to a portion of the machine and cooperating with the counterweight. A guide is desirably disposed in guiding relationship with respect to counterweight and the latter reciprocates during operation of the machine relatively to it. Guide may be pivoted to the machine. Invented by Guy O. Conner, Cleveland Heights, Ohio. Unassigned. Application May 29, 1946. 11 claims.

Dealer Appointments

ERNEST PAYNE, president of Payne & Craig Corp., national distributors of Craig Dri-Sprays and powder, announces appointment of Ralph Leber Co., 426 Polson Bldg., Seattle, Wash., to handle sales for letterpress and carton industries in the states of Oregon and Washington. Type & Press of Illinois, Inc., 220 So. Jefferson St., Chicago 6, Ill., has been appointed a dealer and will service and sell this equipment to the letterpress and carton printing industry in the state of Illinois.

Fototype Catalog

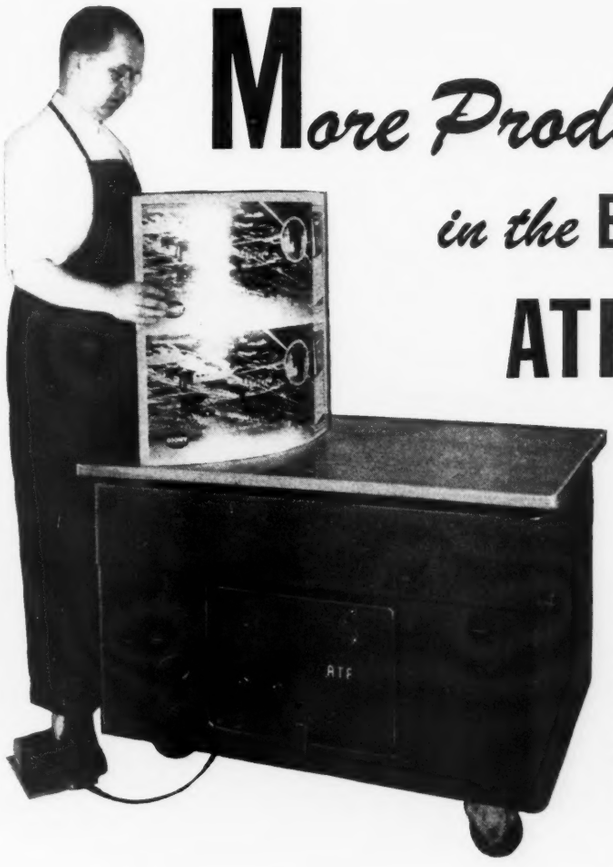
FOTOTYPE Chicago has issued a 26 page illustrated catalog (size 8½ in. by 11 in.) in which is described the Fototype method of "setting" type from individual pads of letters. The composed lines are fastened as set in the stick with Scotch tape ready for photographing in the plate-making process. Specimen lines of Fototype letters available are also shown in the catalog.



Profits result so long as your receipts exceed your disbursements... For 144 years the high quality of Johnson Inks has helped printers to produce fine printing economically.

CHARLES ENEU JOHNSON AND COMPANY
GOOD INKS SINCE 1804
10th and Lombard Streets, Philadelphia, Pa.

NEW YORK • CHICAGO • BOSTON • ST. LOUIS • CLEVELAND • DETROIT • BALTIMORE • KANSAS CITY • PITTSBURGH • ATLANTA • DALLAS



More Production in the Bindery with NEW ATF Paper Joggers...

NOW... *with a flick of a switch, get more production from your paper cutter, perforator, stitcher, folder and press. More economy for your bindery operations. Handle all kinds of stock from onionskin to heavy board and do it fast. • There is profit in time saved with the NEW ATF Paper Joggers. • Styles to fit most sizes of paper stock.*

Vertical action jogger with 28x40-inch hardwood deck (table top) and all-metal cabinet. Entire mechanism enclosed with all controls located outside on convenient panel and foot switch. Height from floor to top of deck, 20 inches, enables operator to jog large sheets with ease.

American Type Founders
Branches in Principal Cities

ATF

Newly Elected Officers Kansas Newspaper Mechanical Conference — Reading left to right: James A. Coates, Director, Topeka Newspaper Printing Co.; Glenn Cole, Director, Salina *Journal*; W. A. Blackburn, Director, Herington *Sun;* Larry Miller, Secretary-Treasurer, Secretary Kansas Press Association, Topeka; L. K. Monger, Director, Consolidated Printing Co., Salina; Vern Williams, President, Topeka Newspaper Printing Co.; Harry Porter, Director, Independence *Reporter*.

Kansas Newspaper Mechanical Conference

THIRTY-FIVE newspaper production and mechanical executives met in Salina, Kas., on Sunday, April 4 to organize the Kansas Newspaper Mechanical Conference. President Vern Williams reports that the conference will devote a portion of the first annual two-day conference to commercial printing plant problems. Mr. Williams explained that there are slightly over 40 daily newspapers in the state and the great majority are small plants. There are also a considerable number of weekly newspapers which need mechanical assistance badly. Most of the plants operate commercial printing departments, hence the endeavor to devote portions of the conference to executives attending the conference from the smaller newspapers and the commercial printing departments.

To provide for all sections of the state to have representation on the board of directors a board of directors has been elected in addition to the president, vice president and the secretary-treasurer. One director was elected from each of the six congressional districts in the state. Of the two directors elected for three, two and one-year terms, one represents the daily papers and one the weekly papers. In addition, a director-at-large was elected as representative of the commercial printing plants for a one-year term.

The first annual meeting will probably be held late in September, the date and city to have been selected in an executive committee meeting in Topeka in May.

it takes time

Burgess Chrome Mats weren't developed overnight. Years of research and experience were necessary to perfect them. Today, stereotypers depend upon Burgess Mats for really faithful reproduction, choose them for consistent behavior.

It takes time to *produce* the perfect mat, too. From raw materials to finished product, in every step of manufacture, Burgess takes time to check, test, and recheck. That's why each Burgess mat is of uniform high quality—can be counted upon to do your toughest stereotyping job.

A Laboratory Product BURGESS Chrome MATS

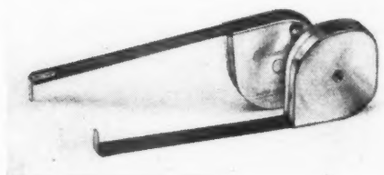
BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

FREEPORT, ILLINOIS

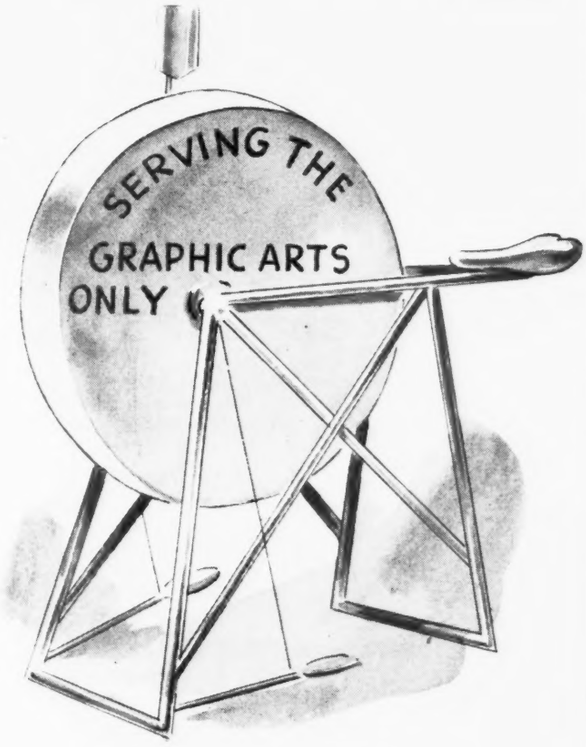
Printers' Tape Measure

MASTER Rule Mfg. Co., Inc., announces the addition of a printers' rule known as the 426 Streamline. This instrument is supplied with a 6 ft. concave spring steel tape with graduations, picas on one edge and inches on the other, clearly etched on both sides so that it can be used at a bench or composing stone as well as on raised work.



The rule tip is 7/16 in. for gripping edges of an object in reach measuring. A precision lock is provided for holding any reading. An inside dimension can be read directly on the rule at the rear edge of the case. The case itself is finished in mirror chrome and is so constructed that it may be taken apart for cleaning or inserting a new blade. Further information about the Master 426 Streamline rule can be had by writing the manufacturer in care of *Printing Equipment Engineer*.

We keep our nose to THIS GRINDSTONE!



The metal problems of just the Graphic Arts Industry need concentrated attention—attention on service, research, deliveries, and new developments. This is why Imperial spends all its energies on metals for this one particular field. Printing metals are our main, our ONLY products.

By such specializations, we are able to supply dependable type metal, give better service and frequently lower users' yearly metal costs. And specialization enabled Imperial to originate the Plus Plan, Dross Drums, free analysis service, to name just a few of the innovations since Imperial's founding.

Would you like to know more about type metal with the accent on service? Ask Imperial!

IMPERIAL TYPE METAL CO.

Serving the Graphic Arts Industry Only

Philadelphia 34 New York 7 Chicago 50

Imperial

The Royle Router

- A large table mounted on a rigidly constructed column.
- Convenient alignment and tightening of driving belts.
- Running parts designed to reduce vibration.
- Sufficient speed at cutter edge to route fine or rough out without reducing speed.
- Precisely fulcrumed elevating mechanism assures immediate reaction to pressure on the foot pedal.
- Changing cutter heads a matter of seconds.
- Speed and balance are built into Royle Routers.

JOHN ROYLE & SONS

Established 1855

10 Essex Street Paterson 3, N. J.

Rapid Delivery!

SOLID IRON BASE

Precision ground top and bottom. Ends and sides milled or ground depending on size. Heights: Standard in .759"; .853" in 1, 2, or 3 column widths. No extra charge for Ludlow slug height. Other sizes available.

MAKE-UP TRUCK

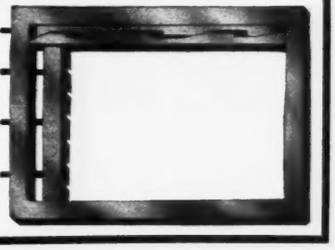
Improved all-steel construction 38½" high. Any height at no extra cost. 7 column top 23½" x 28½". 8 column top 24½" x 28½".

ELEVATING MAKE-UP TRUCK

Rigid, all-steel. Positive raising or lowering feature . . . foolproof operation. 3" movement above or below a given center. 38½" center position.

STEREOTYPE CHASES

Made from special bright steel to precision height Latest electrical welding produces a 1-piece frame, square and true. Orders placed now for future delivery. Write or wire your requirements **now!**



EASTERN NEWSPAPER SUPPLY, INC.

9603 Northern Boulevard, Corona, L. I., New York

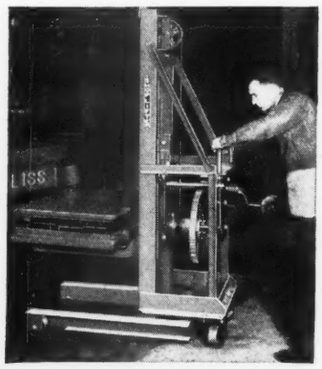
Heavy-Duty Shoplifters

THE Economy Engineering Co. recently announced two heavy duty models of the company's standardized portable elevator. These machines are designated as the Type DX Heavy Duty Shoplifter and are made in two capacities, 1000 lbs. and 2000 lbs.

Features of the new designs include a much heavier framework of steel all welded construction and two ball bearing hand power hoist units designed specially for these machines. The hoist units are of the crank-up and crank-down type and include such features as an automatic holding brake that does not require manual setting or releasing by the operator, a safety ratchet and pawl that also automatically holds the load, and the liberal use of ball bearings to achieve minimum friction in operation. Under the full rated capacity loads, these units require a crank handle pressure of approximately 20 lbs. to elevate or lower a load.

Overall framework dimensions are identical for both 1000 lb. and 2000 lb. capacities but the heavier machine has several reinforcing members to accommodate the heavier loads. Each capacity has its own hoisting unit. The overall height and width of the framework will allow the heavy duty Shoplifters to be taken through any ordinary doorway that is 6 ft. 8 in. high by 25 in. wide or larger. The narrow base-frame width and platform, 24 in. wide, allow these machines to go down narrow aisles and work between closely spaced machines.

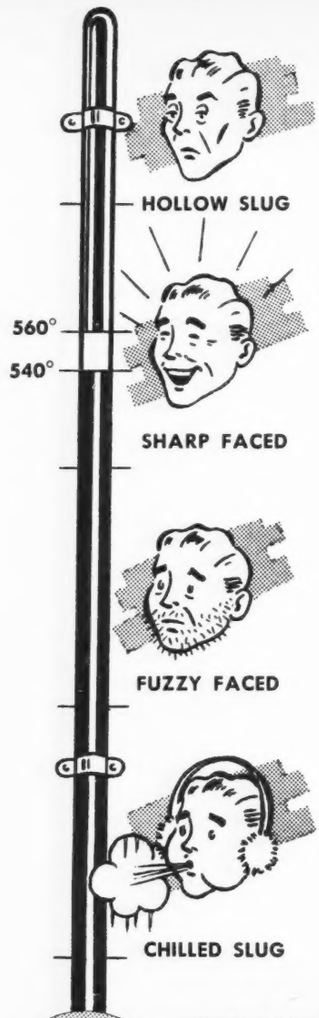
Further details include two 5 in. diameter basewheels under the platform and two 6 in. diam. swivel casters at the opposite end of the framework plus a push bar for easy steering across the floor. A heavy duty foot operated floor lock is an optional feature.



View of Economy Engineering Co.'s Heavy Duty Shoplifter Portable Elevator. Made in two capacities—1000 lbs. and 2000 lbs.

WHEN 20° STANDS BETWEEN CASTING SUCCESS OR failure

.. Save Face With MONOMELT



● When casting slugs on your line-casting machine, a narrow range of 20° is the ideal working temperature. It's so easy to slip above or below and run into such troubles as chilled, hollow, or fuzzy-faced slugs . . . metal squirts . . . or even broken type. Keep your slugs sharp-faced and solid: install MONOMELT Single Melting Feeders on your machines. You maintain strict temperature control at all times with sensitive thermostats; you keep type metal at a constant level in the casting pot with a float control. As a matter of fact, the MONOMELT eliminates the costly pigging operation. It takes dead metal directly from killout, melts it, frees it from dross, and automatically feeds it into the machine pot.

MONOMELT also:

- Reduces makeready time
- Cuts down dross formation
- Lowers metal inventory up to 50%
- Gets maximum production from machines.

(Available in gas or electric)

DEALERS WANTED

Choice territories open to dealers who can provide skilled machinist service.

WRITE TODAY for information on **MONOMELT** *and dealerships.*

THE MONOMELT CO., Inc.

1611 N. E. POLK STREET MINNEAPOLIS 13, MINNESOTA

Liquid Wire Stripper

STRIPPING of electrical wires may be accomplished by the use of Formula 21. Sponsor states it will remove Formex, Formavar, enamel and similar wire insulating coatings. To use, the wire is dipped in the liquid and is wiped off with a rag or blown off with compressed air. No scraping, tools or special cleaning required. This product is claimed to be non-corrosive, non-inflammable, and will not harm fabrics, wood, or metal. Available in 2 oz. bottles, 1 and 5 gal. cans. Formula 21 is applicable for use in mass production as well as for repairs to motors, coils, relays, and similar electrically wired equipment. Write for Catalog Section 71, Aircraft-Marine Products, Inc., in care of *Printing Equipment Engineer*.

RLM Specification Book

THE recently published RLM specification guide for buyers, specifiers and sellers of industrial lighting equipment, has just been reprinted according to announcement by R. W. Staud, President of the RLM Standards Institute.

Entitled the *RLM Standard Specifications for Industrial Lighting Units* this 36 page booklet contains detailed specifications for 14 of the most commonly employed incandescent and fluorescent lighting units. Specifications cover Materials, Shielding and Brightness, Efficiency, Acceptance Criterion, Auxiliary Control Equipment, Ballast Temperatures, Construction, Reflection Factor, Photometric Performance, National Electric Code Requirements and many others.

KIMBLE

CUSTOM-BUILT MOTORS

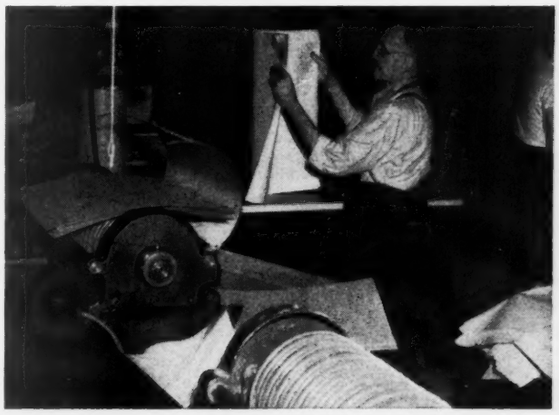
FINE CUSTOM-BUILT MOTORS
FOR THE GRAPHIC ARTS
INDUSTRY SINCE 1904

KIMBLE ELECTRIC
Division of Miehle Printing Press & Mfg. Co.
2858 MT. PLEASANT STREET
BURLINGTON, IOWA
DISTRIBUTED BY: AMERICAN
TYPE FOUNDERS

SYNTRON

"VIBRATING"

PAPER JOGGERS



for Ease, Speed and Economy

—in handling all types of stock from onionskin to heavy board, carbon inter-leaves, snap-outs, etc., Available in various sizes and styles.

Write for illustrated folder

SYNTRON CO., 577 Lexington, Homer City, Pa.

LESTER PRACTICES WITH THE MOGULS EVERY NIGHT

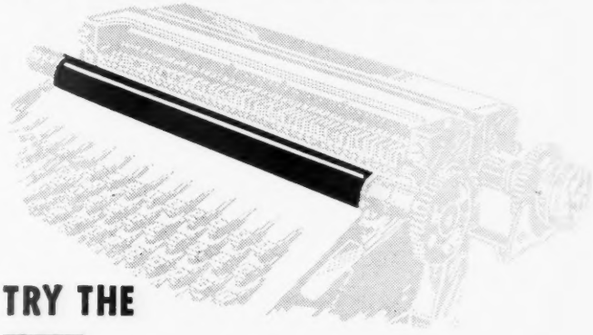
But first he has to carry his papers. That is one of the two reasons why folks on Lester's route get such rapid service . . . The other is that the paper is now being printed with the aid of fast, trouble-free, uniform Certified Dry Mats.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 9 Rockefeller Plaza, Dept. M, New York 20, N. Y.

Convince Yourself...



TRY THE *NEW* ENDURITE RED KEYBOARD RUBBER ROLLER!

After many years of experience with rubber rollers of all types, we recommend ENDURITE as the superior cam roller . . . one that will not glaze, harden or shed.

Compounded of three-fourths pure India Rubber, ENDURITE outlasts many times any other roller on the market!

ENDURITE is available in either smooth or corrugated. Order a pair today . . . try them . . . convince yourself!

PRICE .....$1.00 EA.

LINSCO PRECISION PARTS EST 1914

LINOTYPE SUPPLY CO.
INCORPORATED
337-341 CANAL ST., NEW YORK 13, N. Y.
CANAL 6-0916, 0917

Thirty years of good impressions.....

Today's newspaper plant is more than materials and machinery. Our thirty years of architectural and engineering experience in the printing and publishing industry are available for new building plans or modernization of existing facilities.

- SURVEYS
- CONSULTATION
- MODERNIZATION
- NEW PLANTS

MORTON L. PEREIRA and Associates
ENGINEERS-ARCHITECTS • 100 WEST MONROE BUILDING • CHICAGO 3, ILL.

Mortising Technique at Tribune

FOR mortising electros and stereotype shell casts of the Chicago *Tribune* Doall band saw has been installed in the stereotype department. The saw is equipped to handle page size units.

Special feature of the machine is its welding unit. When the saw blade breaks, it can be welded immediately by a unit built right into the machine. To make a spot welding, the stereotyper, using an emery wheel, first grinds the blade smooth at the break. He then places the ends together, evens the junction and inserts the saw in the welder, which makes the joint and anneals it. With a final grinding to get a uniform blade thickness, the operation is completed in less than a minute.

Many feet of usable saw blade are saved by the arrangement of wheels which can be regulated to fit the length of the blade which runs around the wheels. After a blade, as a result of many breaks, becomes too short to run around the three wheels of the machine, one wheel can be thrown out of play, leaving it carried by two wheels only.

The blade will cut stereo shell thickness plates, plates of 0.65 in. thickness, or type-high, (0.918 in.) casts.

An accurate speed changer is built in the machine. Speed is determined by the "job selector," located on the face of the machine, which lists jobs and sawing speeds for various kinds of materials.

Other features of the machine include a light with a gooseneck fixture which enables the operator to place the light where it will give him the best vision: an oiler which lubricates the saw while cutting, and a chip chute and chip-and-dust removal dust outlet, also with a gooseneck fixture.

Single Wrap Machine Bulletin

WILLIAM B. EDMONDSON CO. has published a four page illustrated bulletin. The bulletin is descriptive of the Crawford Single Wrapper Machine which is used for wrapping newspapers. Capacity of machine ranges from 6 to 52 pages. Wrapping rate, 1000 per hour. Wrapper is rolled and sealed around the paper in one action.

Perforator Bulletin

Rosback Round Hole Rotary Perforators is the title of an amply illustrated bulletin published by F. P. Rosback Co. In it are described 36 in. and 45 in. sizes in single machines for one-way perforating; also in 30 in., 36 in., and 45 in. sizes in angle or two-way machines for perforating the sheet in both directions at one feed. You may write direct to F. P. Rosback Co., or *Printing Equipment Engineer* will gladly pass along your request.

Pacific Conference

(Continued from Page 46)

classification and arrangement of news are all steps we can foresee in the near future.

"It seems to me our newspapers must become much more pictorial in the near future. Now don't get the impression that I want a pictorial section, nor do I want you to use more single or double column pictures. Most of these are entirely too small to be of any importance to the reading public or the newspaper.

"I'd like to see large photographs placed near the story they complement. And I'd like to see these large photographs used on practically every page of the paper—not on just page one alone.

"Soon someone will have the courage to design a modern workmanlike newspaper that will be smaller than our present-day papers and yet larger than the tabloids. There will be less columns and they will be much wider and the type will be 10 pt., leaded one or two points. Naturally, it will be much easier to read and much more convenient. Our present standard-size newspapers have been out of date for many years and few have had the courage to do anything about it.

"I say to you, a 6 column paper, with 10 pt. type and more white space throughout is entirely possible within the next few years. And I predict, we will see a make-up style developed that will be similar to our large magazines.

"I realize that in order to improve the typography of your newspaper, the front office must cooperate by changing this matter of deadlines. I can't understand why it isn't a simple operation to correct. For example, if you allow me to bring to you at noon, the day before publication, say of an afternoon paper, and you explain to me that hereafter copy must be in 24 hours earlier because you are aiming to do a better typographic job, who is the sinner? Naturally, I am—so why shouldn't I cooperate? Therefore, it should be a simple matter for your advertising manager to change the deadlines. When he does, he proves to your composing room foreman he is sincere and is in earnest in wanting to improve the typography of his newspaper."

Following Mr. King's talk Don Jeffries, of the Powell River Paper Co., showed the film *River of Paper*. It was found to be very interesting and educational.

Special Clinic

Leo Shea, Mechanical Superintendent, San Francisco *Examiner*, was Chairman of the Business Managers, Production Managers, Purchasing Agents and Mechanical Superintendents Clinic with Glen Hutchinson, Production Manager of the Los Angeles *Times* as Co-Chairman.

Many things were discussed at this meeting. The subject of accidents in the mechanical departments was brought up. It was brought out that 90 percent of these accidents are caused by things other than the lack of guards, such as lack of proper supervision, lack of adequate instruction, fatigue—in fact, the accident are caused by the human element. Some plants have a committee and this committee meets each month and report all accidents no matter how small. In most cases preventive measures extend to the truck drivers, auto mechanics and even to the carrier boys on their bicycles.

Fire hazard is one of the big problems of the mechanical departments of a newspaper plant and it was given considerable time at this clinic. Many suggestions resulted. Among them was that a blueprint of the building be furnished to the local fire departments of the smaller as well as the larger cities. In this way the firemen can acquaint themselves with

TYPE METAL
REMELTING FURNACES

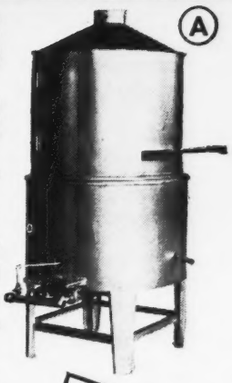
(A) 'Surface' Type Metal Remelting Furnace equipped with Atmospheric Burner and hood. Available in capacities up to 2500 pounds of metal.

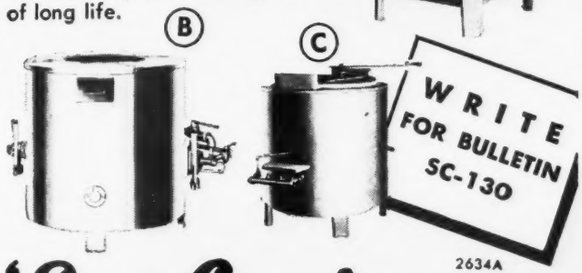
(B) 'Surface' Type Metal Remelting Furnace equipped with Pressure Burner. Available in capacities up to 3200 pounds of metal.

(C) Furnace equipped with atmospheric burner and bottom outlet.

(All types can be equipped with hood)

'Surface' Gas-Fired Furnaces for type metal remelting are designed to provide the industry with an efficient, rapid remelting furnace of long life.



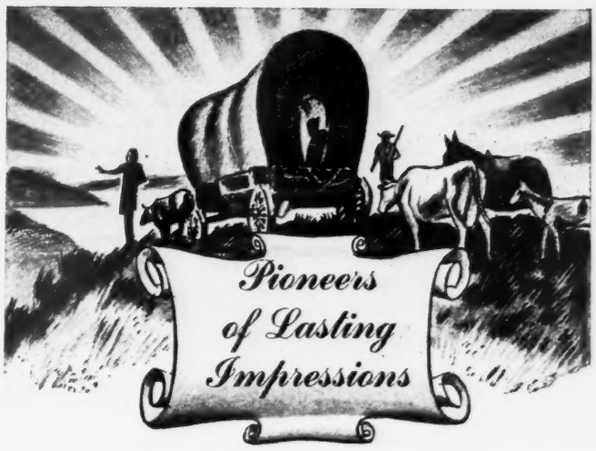


WRITE FOR BULLETIN SC-130

2634A

'Surface' Standard Rated FURNACES

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO



The pioneer—always in the vanguard of America's growth is the symbol of resourcefulness and progress. The American dry mat, pioneered by Benjamin Wood, is today's symbol of quality in the field of stereotyping.

Sample Mats Sent Free Upon Request

WOOD FLONG CORP.

Oldest In The Country — First In The Field

HOOSICK FALLS · NEW YORK

New York City Office: 551 Fifth Ave., New York 17, N. Y.

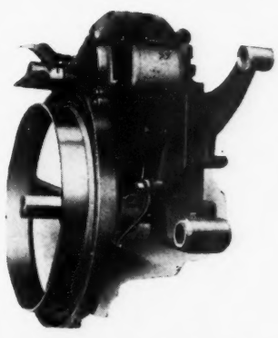
A name as old as

LINOTYPE

the

CUSHMAN *offset* MOTOR

For Linotype and Intertype



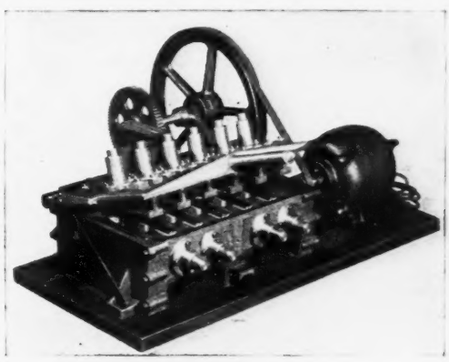
Immediate Delivery

PRECISION TRADE ★ MARK

LINOTYPE PARTS COMPANY

Factory and Main Office
SOUTH HACKENSACK, N. J.
Branch Office 1322 BROADWAY, KANSAS CITY 6, MO.
CHICAGO • MINNEAPOLIS • DENVER

CLEAN and GRAPHITE SPACEBANDS MECHANICALLY!



SOFNAS SPACEBAND CLEANING MACHINE

- **Cleans entire length of spaceband.**
- **Saves energy and the matrices.**
- **The ease made possible encourages cleaning spacebands as often as standard practice requires.**
- **Cleans six spacebands at a time thoroughly and safely by the undisputed principle employed in the hand method, with the added advantage of mechanical uniformity.**

SOFNAS BROS.

45 Hendricks Place **P. O. Box 5227**
Indianapolis 1, Ind.

the exits, fire extinguishers, water supply, etc. Also it was suggested that periodical inspection be made and extinguishers properly filled and inspected, remove all imflamable trash and dirty and oily wiping rags and waste.

Rehash of advertisements also came up as usual. This is another of the big problems and the main cause of increased page costs. Many remedies were suggested but all seemed to have been tried in some district and failed. The only remedy that seemed effective was to charge for the changes made after first proof to the advertiser. This only fails because of the lack of co-operation of all the publications in each district. There is usually one who will not enforce this rule and this causes a collapse of the whole scheme. However, it was suggested that the time spent in making such changes be noted and attached to each ad and sent to the advertising department and in this way keep it always before advertising executive with the hope that some day it will get the desired recognition. In each case it was decided it was a management problem.

There were 75 in attendance.

Stereotype Clinic

Fred D. Wilson, Stereotype Foreman, San Francisco *News*, was chairman of the Stereotype Clinic. George Fuller, Stereotype Superintendent, Cleveland *Press*, was Co-Chairman. Mr. Wilson opened the meeting with a few remarks, introduced Mr. Fuller and turned the meeting over to him. Mr. Fuller is one of the best known stereotype authorities in the country and under his chairmanship the meeting was the best the Pacific Coast stereotypers have had. With his wide knowledge and experience he was able to get the boys on their feet and find out their problems and then he proceeded to get an answer for them. Mr. Fuller spoke at length on direct pressure molding and color plates and gave those present information he has acquired through years of experimenting and putting to actual use this method of molding mats.

Different types of mats were discussed and it was the concensus of opinion that the better grades of mats were cheapest in the long run and produced a better looking product.

Halftones came in for considerable discussion and it was decided that 75 screen halftones were preferred and produced the best results.

It was also brought to the attention of those present that stereotypers generally rolled a poorer mat to send out then they rolled for their own use. This practice was condemned and it was urged that an effort be made to see that this be stopped.

It was suggested that a prepared powder be used in the water for packing to eliminate floating and buckling.

The use of magnesium base was discussed and favored because it was light and easy to handle. However, the Stereotype executives were cautioned not to try to saw this base.

It was decided that all halftones in stereo plates sent to the pressroom should have a depth of 0.003 in. to 0.004 in. for best printing results.

Blankets and corks came up for considerable discussion and many other problems were given a thorough going over.

There were 160 attending this clinic.

Engravers' Clinic

The chairman of the Photo-Engravers' clinic was Harry B. Davidson, Engraving Superintendent, San Francisco *Call-Bulletin*. D. H. Murnik, National Engraving Co., Oakland, was co-chairman. Lon Gangelmeyer, California Ink Co., was a speaker. Bob Smith of the Eastman Kodak Co., was invited to join in at the speakers' table.

The Clinic opened with a discussion introduced by Louis Otto, Portland, (Ore.) *Journal*, as to how to educate the advertiser to use picas instead of inches to mark newspaper copy. He claimed that commercial engravers will make one engraving that will be used by a number of newspapers and the column width of these publications will vary from 11½ to 13 picas. One newspaper is short and others will have to cut into the printing surface or make the cut over with a loss of time.

A lengthy discussion was held on the question as to whether it is advisable to remove the top on zinc plates. All agreed it was not necessary.

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6 PICAS
24 POINT
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30 PICAS
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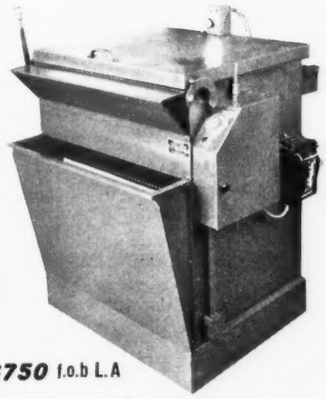

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The quickest way to clean off powder was another topic of discussion. There were several suggestions. One was to warm the plate and use a solvent. Duff Murnik told of a new machine for removing powder by just dipping the plate in a chemical which stands up indifinitely and is furnished by the California Ink Co. Another suggested a mix of white gas and benzol equal parts.

Three and four colors for newspapers was discussed at length. Mr. Murnik claimed there were no short cuts and that it still takes a few days to make a good set of plates.

Zomag metal came up for discussion. It is still new and only a few plates are now trying it. Stops seem to be the beginner's trouble. It was agreed this could be traced to the water used.

Lon Gangelmeyer gave an interesting talk on new equipment and what could be expected in the future. Bob Smith gave some helpful advice on lenses and films.

There were 55 present.

Mailers' Clinic

The mailers of the Pacific Coast are having some difficulty in getting together in sufficient number to get the best out of the conference. They are at least making a good effort and are talking over their problems and having real good results considering the small number attending. They ask the conference officials to give them more publicity to help get out at least a representative group. The chairman this year was Eddie Egan, Mailroom Foreman, Portland, (Ore.) *Journal*, and the co-chairman was Chas. A. Pirie, Mailroom Foreman, San Francisco *Chronicle*. There were only nine in attendance but from reports they did not loose much time. They are in hopes that the next meeting will be much larger.

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Pressroom Clinic

Clyde Bowen, Pressroom Foreman, *San Francisco Wall Street Journal*, was chairman and Robert Scherrer, Superintendent Rotary Pressroom, Pacific Press, Inc., was co-chairman. Fred Wartenberg, Metropolitan Syndicate, New York, was to be a speaker, but was unable to attend because of illness. Perry Long, of the Bryan-Brandenburg Co., engravers, of Los Angeles, substituted for Mr. Wartenberg. Mr. Long has had many years of experience and knows color printing from the artist to the press. He spoke on color plates.

Mr. Tolleson, of the Wood Machinery Co., explained the new plate registering machine for color plates.

Much time was spent on the question asked by Arthur Randall, of the Los Angeles *Times*, as to what caused streaks across the printed paper. He discussed the possibility of this being caused by either blankets or rollers, but in his case he believed it was blankets. Stanfield,

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Los Angeles *Daily News*, remedied this by changing roller bearings and Crebassa, Seattle (Wash.) *Times*, by changing to softer blankets.

Heat-set inks came up for discussion and Robert Scherrer gave much good information. He was asked about the new magazine press recently installed by the Pacific Press, Inc. of Los Angeles, but since it was still in the experimental stage he felt he was not at liberty to say anything about it.

Geo. Fuller, Cleveland *Press* was present and offered many good suggestions.

Attendance at this meeting was 160.

Composing Room Machinists

At the meeting of the composing room machinists, A. M. (Bert) Fellows, Director, Department of Printing, California State Polytechnic College, was chairman, and P. H. Sanford, Machinist, Tucson, (Ariz.) *Daily Star*, was co-chairman.

Archer Albin, Chief Engineer of Mergenthaler Linotype Co., and W. J. Easton, Mohr Saw Co., Chicago, were speakers.

Mr. Albin demonstrated and explained a new heat control for Linotype electric pots, and told about a re-designed gas pot his company was now manufacturing. He also spoke of a number of improvements the new models of machines would have.

Mr. Easton explained thoroughly the adjustments and principle of the Mohr saw. He had a number of slides which were flashed on a large screen and with their aid he was able to give a very interesting and instructive talk. He had a number of slides with which he explained some of the adjustments of typesetting machines and tricks of the trade.

After a number of questions and answers the meeting adjourned to meet a little later for those who desired to see and hear the balance of Mr. Easton's talk. About 25 attended the adjourned meeting and at the regular clinic there was an attendance of 140.

Composing Clinic

The Composing Room Clinic was carried off with the usual success by B. J. McLaughlin, Composing Room Foreman, Seattle, (Wash.) *Times*, as chairman. Frank McCoy, Composing Room Foreman, San Francisco *Examiner*, was co-chairman. Archer Albin, of the Mergenthaler Linotype Co., and Howard N. King, of Intertype Corporation, were speakers.

The meeting was attended by 110 executive and from all accounts was one of the best held.

Non-Metropolitan Clinic

The Non-Metropolitan Newspapers General Clinic included all the mechanical departments of the small newspaper plants. Its chairman was L. Grant Kellogg, Superintendent, Santa Rosa, (Calif.) *Press-Democrat*, and the co-chairman was Marion S. Walker, Business Manager, Ventura, (Calif.) *Star-Free Press*. There were 57 present and this meeting was also pronounced a success by all in attendance.

Business Session

The conference closed with the business session Monday afternoon. A motion was made and passed that a technical committee be appointed to answer questions between conference meetings. This committee has not been appointed at this time but will soon be announced by the new president.

Officers Elected

President—Harold Winn, Superintendent, Hollywood (Calif.) *Citizen-News*; Northern Div. Vice President—Fred Stoore, Production Manager, San Francisco *News*; Southern Div. Vice President—L. M. Richardson, Superintendent, Los Angeles *Herald-Express*; Northwestern Vice President—Louis F. Otto, Engraving Superintendent, Portland (Ore.) *Journal*; Secretary Northern Div.—Edw. N. Conley, Color Press Foreman, San Francisco *Chronicle*; Southern Div.—Fred J. Moyer, Machinist, Los Angeles *Daily News*.

The place of the 1949 meeting is Hollywood, Calif., if the necessary arrangements can be made. If not, the meeting will be held again in Los Angeles. The date will be announced in the near future.

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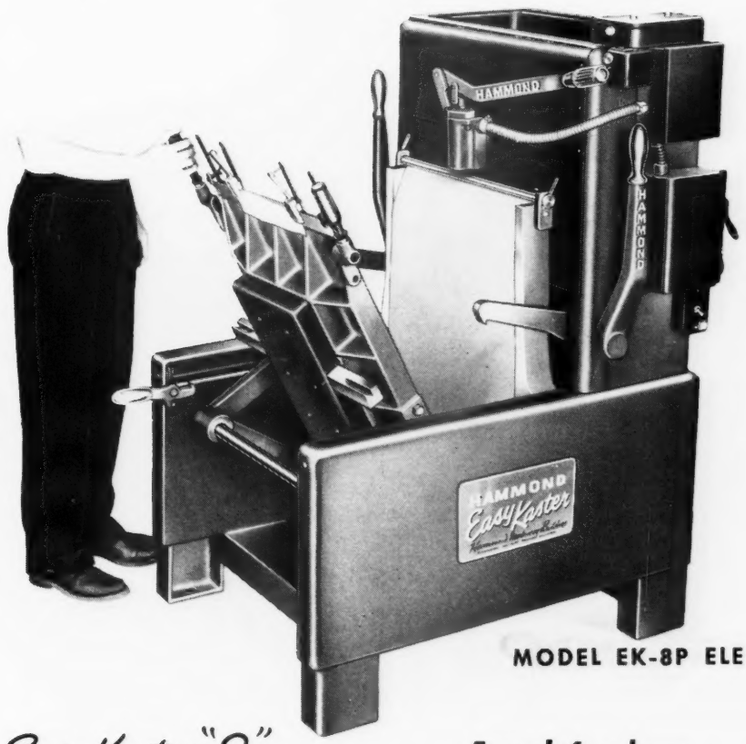

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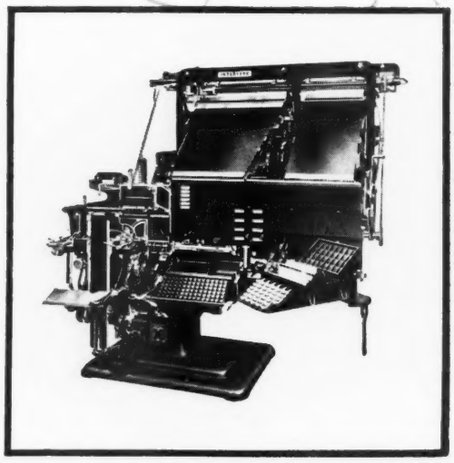

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